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THE

INDIAN YEAR BOOK

1922.

A STATISTICAL AND HISTORICAL ANNUAL OF
THE INDIAN EMPIRE, WITH AN
EXPLANATION OF THE
PRINCIPAL TOPICS
OF THE DAY

EDITED BY

SIR STANLEY REED, K.B.E., LL.D.

NINTH YEAR OF ISSUE

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CALENDAR FOR 1922.

January.

S.	1	8	15	22	29	
M.	2	9	16	23	30	
Tu.	3	10	17	24	31	
W.	4	11	18	25		
Th.	5	12	19	26		
F.	6	13	20	27		
S.	7	14	21	28		

February.

S.	5	12	19	26	
M.	6	13	20	27	
Tu.	7	14	21	28	
W.	1	8	15	22	
Th.	2	9	16	23	
F.	3	10	17	24	
S.	4	11	18	25	

March.

S	5	12	19	26	
M.	6	13	20	27	
Tu.	7	14	21	28	
W.	1	8	15	22	29
Th.	2	9	16	23	30
F	3	10	17	24	31
S.	4	11	18	25	

April.

S.	2	9	16	23	30
M.	3	10	17	24	
Tu.	4	11	18	25	
W.	5	12	19	26	
Th.	6	13	20	27	
F.	7	14	21	28	
S	1	8	15	22	29

May.

S.	7	14	21	28	
M.	1	8	15	22	29
Tu.	2	9	16	23	30
W.	3	10	17	24	31
Th.	4	11	18	25	
F.	5	12	19	26	
S	6	13	20	27	

June.

S.	4	11	18	25	
M.	5	12	19	26	
Tu.	6	13	20	27	
W.	7	14	21	28	
Th.	1	8	15	22	29
F.	2	9	16	23	30
S.	3	10	17	24	

July.

S.	2	9	16	23	30
M.	3	10	17	24	31
Tu.	4	11	18	25	
W.	5	12	19	26	
Th.	6	13	20	27	
F.	7	14	21	28	
S.	1	8	15	22	29

August.

S.	6	13	20	27	
M.	7	14	21	28	
Tu.	1	8	15	22	29
W.	2	9	16	23	30
Th.	3	10	17	24	31
F.	4	11	18	25	
S.	5	12	19	26	

September.

S.	3	10	17	24	
M.	4	11	18	25	
Tu.	5	12	19	26	
W.	6	13	20	27	
Th.	7	14	21	28	
F.	1	8	15	22	29
S.	2	9	16	23	30

October.

S.	1	8	15	22	29
M.	2	9	16	23	30
Tu.	3	10	17	24	31
W.	4	11	18	25	
Th	5	12	19	26	
F.	6	13	20	27	
S.	7	14	21	28	

November.

S.	5	12	19	26	
M.	6	13	20	27	
Tu.	7	14	21	28	
W.	1	8	15	22	29
Th	2	9	16	23	30
F.	3	10	17	24	
S.	4	11	18	25	

December.

S.	3	10	17	24	31
M.	4	11	18	25	
Tu.	5	12	19	26	
W.	6	13	20	27	
Th.	7	14	21	28	
F.	1	8	15	22	29
S.	2	9	16	23	30

Phases of the Moon—JANUARY 31 Days.

☽ First Quarter .....6th, 3h. 53·8m. P.M. | ☾ Last Quarter ....20th, 11h. 29·8m. A.M.

○ Full Moon. ..... 13th, 8h. 6·5m. P.M. | ● New Moon .....28th, 5h. 18·2m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° S. ′
Sunday ..	1	1	7	12	6	12	0	42	3·06	23 4
Monday ..	2	2	7	12	6	13	0	42	4·06	22 59
Tuesday ..	3	3	7	13	6	13	0	43	5·06	22 53
Wednesday ..	4	4	7	13	6	14	0	43	6·06	22 48
Thursday ..	5	5	7	13	6	15	0	44	7·06	22 41
Friday ..	6	6	7	13	6	15	0	44	8·06	22 35
Saturday ..	7	7	7	14	6	16	0	45	9·06	22 28
Sunday ..	8	8	7	14	6	17	0	45	10·06	22 20
Monday ..	9	9	7	14	6	17	0	46	11·06	22 12
Tuesday ..	10	10	7	14	6	18	0	46	12·06	22 4
Wednesday ..	11	11	7	14	6	18	0	46	13·06	21 55
Thursday ..	12	12	7	15	6	19	0	47	14·06	21 45
Friday ..	13	13	7	15	6	20	0	47	15·06	21 36
Saturday ..	14	14	7	15	6	21	0	48	16·06	21 26
Sunday ..	15	15	7	15	6	22	0	48	17·06	21 15
Monday ..	16	16	7	15	6	22	0	48	18·06	21 4
Tuesday ..	17	17	7	15	6	23	0	49	19·06	20 53
Wednesday ..	18	18	7	15	6	24	0	49	20·06	20 41
Thursday ..	19	19	7	15	6	25	0	49	21·06	20 29
Friday ..	20	20	7	15	6	25	0	50	22·06	20 16
Saturday ..	21	21	7	15	6	26	0	50	23·06	20 3
Sunday ..	22	22	7	15	6	27	0	50	24·06	19 50
Monday ..	23	23	7	15	6	27	0	50	25·06	19 36
Tuesday ..	24	24	7	15	6	28	0	51	26·06	19 22
Wednesday ..	25	25	7	15	6	29	0	51	27·06	19 8
Thursday ..	26	26	7	15	6	29	0	51	28·06	18 53
Friday ..	27	27	7	14	6	29	0	51	29·06	18 38
Saturday ..	28	28	7	14	6	30	0	52	0·31	18 23
Sunday ..	29	29	7	14	6	30	0	52	1·31	18 7
Monday ..	30	30	7	14	6	31	0	52	2·31	17 51
Tuesday ..	31	31	7	14	6	31	0	52	3·31	17 34

Phases of the Moon—FEBRUARY 28 Days.

☽ First Quarter..... 5th, 10h. 22·3m. A.M. | ☾ Last Quarter ....18th, 11h. 44·1m. P.M.

○ Full Moon .... 12th, 6h. 47·5m. P.M. | ● New Moon .....27th, 0h. 17·7m. A.M

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H	M.	H. P.M.	M.	D.	° S. ′
Wednesday ..	1	32	7	13	6	31	0	52	4·31	17 18
Thursday .	2	33	7	13	6	32	0	53	5·31	17 1
Friday ..	3	34	7	13	6	32	0	53	6·31	16 43
Saturday ..	4	35	7	12	6	33	0	53	7·31	16 26
Sunday ..	5	36	7	12	6	34	0	53	8·31	16 8
Monday ..	6	37	7	12	6	34	0	53	9·31	15 50
Tuesday ..	7	38	7	11	6	35	0	53	10·31	15 31
Wednesday ..	8	39	7	11	6	35	0	53	11·31	15 12
Thursday ..	9	40	7	10	6	36	0	53	12·31	14 52
Friday ..	10	41	7	10	6	36	0	53	13·31	14 34
Saturday ..	11	42	7	10	6	37	0	53	14·31	14 15
Sunday ..	12	43	7	9	6	37	0	53	15·31	13 55
Monday ..	13	44	7	9	6	38	0	53	16·31	13 35
Tuesday ..	14	45	7	8	6	38	0	53	17·31	13 15
Wednesday ..	15	46	7	7	6	39	0	53	18·31	12 55
Thursday ..	16	47	7	7	6	39	0	53	19·31	12 34
Friday ..	17	48	7	6	6	40	0	53	20·31	12 13
Saturday ..	18	49	7	5	6	40	0	53	21·31	11 52
Sunday ..	19	50	7	5	6	40	0	53	22·31	11 31
Monday ..	20	51	7	4	6	41	0	53	23·31	11 10
Tuesday ..	21	52	7	4	6	41	0	53	24·31	10 48
Wednesday ..	22	53	7	3	6	41	0	53	25·31	10 27
Thursday ..	23	54	7	2	6	42	0	52	26·31	10 5
Friday ..	24	55	7	2	6	42	0	52	27·31	9 43
Saturday ..	25	56	7	1	6	42	0	52	28·31	9 21
Sunday ..	26	57	7	1	6	43	0	51	29·31	8 59
Monday ..	27	58	7	0	6	43	0	51	0·52	8 36
Tuesday ..	28	59	7	0	6	43	0	51	1·52	8 14

Phases of the Moon—MARCH 31 Days.

☽ First Quarter .... 7th, 0h. 51·6m A.M. | ☾ Last Quarter .... 20th, 2h. 13·0m. P.M.

○ Full Moon ..... 13th, 4h 44·4m. P.M. | ● New Moon ..... 28th, 6h. 33·4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° S. ′
Wednesday ..	1	60	6	59	6	44	0	51	2·52	7 51
Thursday ..	2	61	6	58	6	45	0	51	3·52	7 28
Friday ..	3	62	6	57	6	45	0	51	4·52	7 5
Saturday ..	4	63	6	56	6	45	0	51	5·52	6 42
Sunday ..	5	64	6	56	6	46	0	51	6·52	6 19
Monday ..	6	65	6	55	6	46	0	50	7·52	5 56
Tuesday ..	7	66	6	54	6	47	0	50	8·52	5 33
Wednesday ..	8	67	6	53	6	47	0	50	9·52	5 9
Thursday ..	9	68	6	53	6	47	0	50	10·52	4 46
Friday ..	10	69	6	52	6	48	0	49	11·52	4 23
Saturday ..	11	70	6	51	6	48	0	49	12·52	3 59
Sunday ..	12	71	6	50	6	48	0	49	13·52	3 36
Monday ..	13	72	6	49	6	48	0	49	14·52	3 12
Tuesday ..	14	73	6	49	6	49	0	48	15·52	2 48
Wednesday ..	15	74	6	48	6	49	0	48	16·52	2 25
Thursday ..	16	75	6	47	6	49	0	48	17·52	2 1
Friday ..	17	76	6	46	6	49	0	48	18·52	1 37
Saturday ..	18	77	6	45	6	49	0	48	19·52	1 14
Sunday ..	19	78	6	44	6	50	0	47	20·52	0 50
Monday ..	20	79	6	43	6	50	0	47	21·52	0 26
Tuesday ..	21	80	6	42	6	50	0	47	22·52	0 3 N.
Wednesday ..	22	81	6	41	6	50	0	46	23·52	0 21
Thursday ..	23	82	6	40	6	51	0	46	24·52	0 45
Friday ..	24	83	6	39	6	51	0	46	25·52	1 8
Saturday ..	25	84	6	39	6	51	0	45	26·52	1 32
Sunday ..	26	85	6	39	6	51	0	45	27·52	1 56
Monday ..	27	86	6	38	6	51	0	45	28·52	2 19
Tuesday ..	28	87	6	37	6	52	0	45	29·52	2 43
Wednesday ..	29	88	6	36	6	52	0	44	0·76	3 6
Thursday ..	30	89	6	35	6	52	0	44	1·76	3 29
Friday ..	31	90	6	34	6	52	0	44	2·76	3 53

Phases of the Moon—APRIL 30 Days.

☽ First Quarter .... 5th, 11h. 15·6m. A.M. | ☾ Last Quarte .... 19th, 6h. 23·7m. A.M.

○ Full Moon..... 12th, 2h. 13·7m. A.M. | ● New Moon ..... 27th, 10h. 33·7m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° N. ′
Saturday ..	1	91	6	33	6	53	0	43	3·76	4 16
Sunday ..	2	92	6	33	6	53	0	43	4·76	4 39
Monday ..	3	93	6	32	6	53	0	42	5·76	5 2
Tuesday ..	4	94	6	31	6	53	0	42	6·76	5 25
Wednesday ..	5	95	6	30	6	54	0	42	7·76	5 48
Thursday ..	6	96	6	29	6	54	0	42	8·76	6 11
Friday ..	7	97	6	28	6	54	0	41	9·76	6 34
Saturday ..	8	98	6	28	6	54	0	41	10·76	6 56
Sunday ..	9	99	6	27	6	54	0	41	11·76	7 19
Monday ..	10	100	6	26	6	55	0	40	12·76	7 41
Tuesday ..	11	101	6	25	6	55	0	40	13·76	8 3
Wednesday ..	12	102	6	24	6	55	0	40	14·76	8 25
Thursday ..	13	103	6	24	6	56	0	40	15·76	8 47
Friday ..	14	104	6	23	6	56	0	39	16·76	9 9
Saturday ..	15	105	6	22	6	56	0	39	17·76	9 31
Sunday ..	16	106	6	21	6	56	0	39	18·76	9 52
Monday ..	17	107	6	21	6	57	0	38	19·76	10 13
Tuesday ..	18	108	6	20	6	57	0	38	20·76	10 34
Wednesday ..	19	109	6	19	6	57	0	38	21·76	10 55
Thursday ..	20	110	6	19	6	57	0	38	22 76	11 16
Friday ..	21	111	6	18	6	57	0	38	23·76	11 37
Saturday ..	22	112	6	17	6	58	0	37	24·76	11 57
Sunday ..	23	113	6	16	6	58	0	37	25·76	12 17
Monday ..	24	114	6	15	6	58	0	37	26·76	12 37
Tuesday ..	25	115	6	14	6	59	0	37	27·76	12 57
Wednesday ..	26	116	6	14	6	59	0	37	28·76	13 17
Thursday ..	27	117	6	13	6	59	0	36	0·09	13 36
Friday ..	28	118	6	13	7	0	0	36	1·09	13 55
Saturday ..	29	119	6	13	7	0	0	36	2·09	14 14
Sunday ..	30	120	6	12	7	0	0	36	3·09	14 33

Phases of the Moon—MAY 31 Days.

☽ First Quarter .... 4th, 6h. 25·8m. P.M. | ☾ Last Quarter.... 18th, 11h. 46·9m. P.M.

○ Full Moon .....11th, 11h. 36·2m. P.M. | ● New Moon..... 25th, 11h. 34·0m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	N. ′
Monday ..	1	121	6	11	7	1	0	36	4·09	14	51
Tuesday ..	2	122	6	11	7	1	0	36	5·09	15	10
Wednesday ..	3	123	6	10	7	1	0	36	6·09	15	28
Thursday ..	4	124	6	10	7	2	0	35	7·09	15	45
Friday ..	5	125	6	9	7	2	0	35	8·09	16	3
Saturday ..	6	126	6	9	7	2	0	35	9·09	16	20
Sunday ..	7	127	6	8	7	3	0	35	10·09	16	37
Monday ..	8	128	6	8	7	3	0	35	11·09	16	53
Tuesday ..	9	129	6	7	7	3	0	35	12·09	17	10
Wednesday ..	10	130	6	7	7	4	0	35	13·09	17	26
Thursday ..	11	131	6	6	7	4	0	35	14·09	17	42
Friday ..	12	132	6	6	7	4	0	35	15·09	17	57
Saturday ..	13	133	6	5	7	5	0	35	16·09	18	2
Sunday ..	14	134	6	5	7	5	0	35	17·09	18	27
Monday ..	15	135	6	5	7	6	0	35	18·09	18	42
Tuesday ..	16	136	6	4	7	6	0	35	19·09	18	56
Wednesday ..	17	137	6	4	7	6	0	35	20·09	19	10
Thursday ..	18	138	6	4	7	7	0	35	21·09	19	27
Friday ..	19	139	6	3	7	7	0	35	22·09	19	37
Saturday ..	20	140	6	3	7	7	0	35	23·09	19	50
Sunday ..	21	141	6	3	7	8	0	35	24·09	20	2
Monday ..	22	142	6	2	7	8	0	35	25·09	20	14
Tuesday ..	23	143	6	2	7	9	0	35	26·09	20	26
Wednesday ..	24	144	6	2	7	9	0	35	27·09	20	38
Thursday ..	25	145	6	2	7	9	0	35	28·09	20	49
Friday ..	26	146	6	2	7	10	0	36	29·09	21	0
Saturday ..	27	147	6	2	7	10	0	36	0·55	21	10
Sunday ..	28	148	6	1	7	11	0	36	1·55	21	21
Monday ..	29	149	6	1	7	11	0	36	2·55	21	33
Tuesday ..	30	150	6	1	7	11	0	36	3·55	21	40
Wednesday ..	31	151	6	1	7	12	0	36	4·55	21	49

Phases of the Moon—JUNE 30 Days.

☽ Firs Quarter.... 2nd, 11h. 40·1m. P.M. | ☾ Last Quarter ....17th, 5h. 33·2m. P.M

○ Full Moon ..... 9th, 9h. 27·9m. P.M. | ● New Moon .....25th, 9h. 49·7m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′ N.
Thursday ..	1	152	6	1	7	12	0	36	5·55	21	5
Friday ..	2	153	6	1	7	12	0	36	6·55	22	6
Saturday ..	3	154	6	1	7	13	0	37	7·55	22	13
Sunday ..	4	155	6	1	7	13	0	37	8·55	22	21
Monday ..	5	156	6	1	7	14	0	37	9·55	22	28
Tuesday ..	6	157	6	1	7	14	0	37	10·55	22	35
Wednesday ..	7	158	6	1	7	14	0	37	11·55	22	41
Thursday ..	8	159	6	1	7	15	0	37	12·55	22	47
Friday ..	9	160	6	1	7	15	0	38	13·55	22	52
Saturday ..	10	161	6	1	7	15	0	38	14·55	22	57
Sunday ..	11	162	6	1	7	16	0	38	15·55	23	2
Monday ..	12	163	6	1	7	16	0	38	16 55	23	6
Tuesday ..	13	164	6	1	7	16	0	38	17·55	23	10
Wednesday ..	14	165	6	1	7	17	0	39	18·55	23	14
Thursday ..	15	166	6	1	7	17	0	39	19·55	23	17
Friday ..	16	167	6	1	7	17	0	39	20·55	23	20
Saturday ..	17	168	6	1	7	17	0	39	21·55	23	22
Sunday ..	18	169	6	2	7	18	0	39	22·55	23	24
Monday ..	19	170	6	2	7	18	0	40	23·55	23	25
Tuesday ..	20	171	6	2	7	18	0	40	24·55	23	26
Wednesday ..	21	172	6	2	7	18	0	40	25·55	23	27
Thursday ..	22	173	6	3	7	19	0	40	26·55	23	27
Friday ..	23	174	6	3	7	19	0	40	27·55	23	27
Saturday ..	24	175	6	3	7	19	0	41	28·55	23	26
Sunday ..	25	176	6	3	7	19	0	41	0·12	23	25
Monday ..	26	177	6	3	7	19	0	41	1·12	23	23
Tuesday ..	27	178	6	4	7	19	0	41	2·12	23	21
Wednesday ..	28	179	6	4	7	20	0	42	3·12	23	19
Thursday ..	29	180	6	4	7	20	0	42	4·12	23	16
Friday ..	30	181	6	5	7	20	0	42	5·12	23	13

Phases of the Moon—JULY 31 Days.

☽ First Quarter ....2nd, 4h. 21·9m. A.M.
○ Full Moon .....9th, 8h. 37·3m. A.M.
☾ Last Quarter .... 17th, 10h. 43 0m. A.M.
● New Moon .....24th, 6h. 17·1m. P.M.
☽ First Quarter.....31st. 9h. 51·6m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′ N.
Saturday ..	1	182	6	5	7	20	0	42	6·12	23	10
Sunday ..	2	183	6	5	7	20	0	42	7·12	23	6
Monday ..	3	184	6	6	7	20	0	43	8·12	23	2
Tuesday .	4	185	6	6	7	20	0	43	9·12	22	57
Wednesday ..	5	186	6	6	7	20	0	43	10·12	22	52
Thursday ..	6	187	6	7	7	20	0	43	11·12	22	46
Friday ..	7	188	6	7	7	20	0	43	12·12	22	40
Saturday ..	8	189	6	7	7	20	0	43	13·12	22	34
Sunday ..	9	190	6	8	7	20	0	44	14·12	22	27
Monday ..	10	191	6	8	7	20	0	44	15·12	22	20
Tuesday ..	11	192	6	8	7	20	0	44	16·12	22	13
Wednesday ..	12	193	6	8	7	20	0	44	17·12	22	5
Thursday ..	13	194	6	8	7	20	0	44	18·12	21	57
Friday ..	14	195	6	9	7	20	0	44	19·12	21	48
Saturday ..	15	196	6	9	7	19	0	44	20·12	21	39
Sunday ..	16	197	6	9	7	19	0	44	21·12	21	30
Monday ..	17	198	6	10	7	19	0	45	22·12	21	20
Tuesday ..	18	199	6	10	7	19	0	45	23·12	21	10
Wednesday ..	19	200	6	10	7	19	0	45	24·12	20	59
Thursday ..	20	201	6	11	7	18	0	45	25·12	20	48
Friday ..	21	202	6	11	7	18	0	45	26 12	20	37
Saturday ..	22	203	6	12	7	18	0	45	27 12	20	26
Sunday ..	23	204	6	12	7	18	0	45	28·12	20	14
Monday ..	24	205	6	12	7	17	0	45	29·12	20	2
Tuesday ..	25	206	6	13	7	17	0	45	0·77	19	19
Wednesday ..	26	207	6	13	7	17	0	45	1·77	19	36
Thursday ..	27	208	6	13	7	17	0	45	2·77	19	23
Friday ..	28	209	6	14	7	16	0	45	3·77	19	10
Saturday ..	29	210	6	14	7	16	0	45	4·77	18	56
Sunday ..	30	211	6	14	7	16	0	45	5·77	18	42
Monday ..	31	212	6	15	7	15	0	45	6·77	18	27

Phases of the Moon—AUGUST 31 Days.

○ Full Moon.....7th, 9h. 48·7m. P.M. | ● New Moon .....23rd, 2h. 4·0m. A.M.

☾ Last Quarter.....16th, 2h. 15·8m. A.M. | ☽ First Quarter ....29th, 7h. 21·9m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon
			H.	M.	H.	M.	H. P.M.	M.	D.	° N. ′
Tuesday ..	1	213	6	15	7	15	0	45	7·77	18 13
Wednesday ..	2	214	6	15	7	14	0	45	8·77	17 58
Thursday ..	3	215	6	16	7	14	0	45	9·77	17 42
Friday ..	4	216	6	16	7	13	0	45	10·77	17 27
Saturday ..	5	217	6	16	7	13	0	45	11·77	17 11
Sunday ..	6	218	6	17	7	12	0	45	12·77	16 55
Monday ..	7	219	6	17	7	12	0	44	13·77	16 38
Tuesday ..	8	220	6	17	7	11	0	44	14·77	16 21
Wednesday ..	9	221	6	18	7	11	0	44	15·77	16 5
Thursday ..	10	222	6	18	7	10	0	44	16·77	15 47
Friday ..	11	223	6	18	7	9	0	44	17·77	15 0
Saturday ..	12	224	6	19	7	9	0	44	18·77	15 12
Sunday ..	13	225	6	19	7	8	0	44	19·77	14 54
Monday ..	14	226	6	19	7	8	0	43	20·77	14 36
Tuesday ..	15	227	6	20	7	7	0	43	21·77	14 17
Wednesday ..	16	228	6	20	7	6	0	43	22·77	13 59
Thursday ..	17	229	6	20	7	6	0	43	23·77	13 40
Friday ..	18	230	6	20	7	5	0	43	24·77	13 21
Saturday ..	19	231	6	21	7	4	0	42	25·77	13 1
Sunday ..	20	232	6	21	7	4	0	42	26·77	12 42
Monday ..	21	233	6	21	7	3	0	42	27·77	12 22
Tuesday ..	22	234	6	21	7	2	0	42	28·77	12 2
Wednesday ..	23	235	6	21	7	1	0	42	0·44	11 42
Thursday ..	24	236	6	22	7	1	0	41	1·44	11 22
Friday ..	25	237	6	22	7	0	0	41	2·44	11 1
Saturday ..	26	238	6	22	6	59	0	40	3·44	10 40
Sunday ..	27	239	6	22	6	59	0	40	4·44	10 20
Monday ..	28	240	6	23	6	58	0	40	5·44	9 59
Tuesday ..	29	241	6	23	6	57	0	40	6·44	9 37
Wednesday ..	30	242	6	23	6	56	0	39	7·44	9 16
Thursday ..	31	243	6	23	6	55	0	39	8·44	8 55

Phases of the Moon—SEPTEMBER 30 Days.

○ Full Moon ..... 6th, 1h. 17·2m. P.M. | ● New Moon .....21st, 10h. 8·3m. A.M.

☾ Last Quarter.....14th, 3h. 50·0m. P.M. | ☽ First Quarter ....28th, 4h. 10·4m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	N. °
Friday ..	1	244	6 23	6 55	0 39	9·44	8 33
Saturday ..	2	245	6 24	6 54	0 39	10·44	8 11
Sunday ..	3	246	6 24	6 53	0 38	11·44	7 50
Monday ..	4	247	6 24	6 52	0 38	12·44	7 28
Tuesday ..	5	248	6 24	6 51	0 38	13·44	7 5
Wednesday ..	6	249	6 24	6 50	0 37	14·44	6 43
Thursday ..	7	250	6 25	6 50	0 37	15·44	6 20
Friday ..	8	251	6 25	6 49	0 37	16·44	5 58
Saturday ..	9	252	6 25	6 48	0 36	17·44	5 36
Sunday ..	10	253	6 25	6 47	0 36	18·44	5 13
Monday ..	11	254	6 25	6 46	0 36	19·44	4 50
Tuesday ..	12	255	6 25	6 45	0 35	20·44	4 28
Wednesday ..	13	256	6 26	6 44	0 35	21·44	4 5
Thursday ..	14	257	6 26	6 43	0 35	22·44	3 43
Friday ..	15	258	6 26	6 43	0 34	23·44	3 19
Saturday ..	16	259	6 26	6 42	0 34	24·44	2 56
Sunday ..	17	260	6 26	6 41	0 33	25·44	2 32
Monday ..	18	261	6 27	6 40	0 33	26·44	2 9
Tuesday ..	19	262	6 27	6 39	0 33	27·44	1 46
Wednesday ..	20	263	6 27	6 38	0 32	28·44	1 22
Thursday ..	21	264	6 27	6 37	0 32	0·11	0 59
Friday ..	22	265	6 27	6 36	0 32	1·11	0 36
Saturday ..	23	266	6 27	6 36	0 31	2·11	0 13
Sunday ..	24	267	6 28	6 35	0 31	3·11	S. 0 11
Monday ..	25	268	6 28	6 34	0 31	4·11	0 34
Tuesday ..	26	269	6 28	6 33	0 30	5·11	0 57
Wednesday ..	27	270	6 28	6 32	0 30	6·11	1 21
Thursday ..	28	271	6 28	6 31	0 30	7·11	1 44
Friday ..	29	272	6 29	6 30	0 29	8·11	2 8
Saturday ..	30	273	6 29	6 29	0 29	9·11	2 34

Phases of the Moon—OCTOBER 31 Days.

○ Full Moon..... 6th, 6h. 28·3m. A.M. | ● New Moon.....20th, 7h. 10·2m. P.M.

☾ Last Quarter....14th, 3h. 25·4m. A.M. | ☽ First Quarter....27th, 6h. 56·4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	S. ° ′
Sunday ..	1	274	6	29	6	29	0	28	10·11	2 54
Monday ..	2	275	6	29	6	28	0	28	11·11	3 18
Tuesday ..	3	276	6	29	6	27	0	28	12·11	3 41
Wednesday ..	4	277	6	30	6	26	0	28	13·11	4 4
Thursday ..	5	278	6	30	6	25	0	27	14·11	4 27
Friday ..	6	279	6	30	6	24	0	27	15·11	4 50
Saturday ..	7	280	6	30	6	24	0	27	16·11	5 13
Sunday ..	8	281	6	30	6	23	0	27	17·11	5 36
Monday ..	9	282	6	31	6	22	0	26	18·11	5 50
Tuesday ..	10	283	6	31	6	21	0	26	19·11	6 22
Wednesday ..	11	284	6	31	6	20	0	26	20·11	6 45
Thursday ..	12	285	6	31	6	19	0	25	21·11	7 8
Friday ..	13	286	6	32	6	19	0	25	22·11	7 30
Saturday ..	14	287	6	32	6	18	0	25	23·11	7 53
Sunday ..	15	288	6	33	6	17	0	25	24·11	8 15
Monday ..	16	289	6	33	6	16	0	25	25·11	8 37
Tuesday ..	17	290	6	33	6	16	0	24	26·11	8 59
Wednesday ..	18	291	6	34	6	15	0	24	27·11	9 22
Thursday ..	19	292	6	34	6	14	0	24	28·11	9 43
Friday ..	20	293	6	34	6	14	0	24	29·11	10 5
Saturday ..	21	294	6	34	6	13	0	24	0·73	10 27
Sunday ..	22	295	6	35	6	12	0	23	1·73	10 48
Monday ..	23	296	6	35	6	12	0	23	2·73	11 9
Tuesday ..	24	297	6	36	6	11	0	23	3·73	11 30
Wednesday ..	25	298	6	36	6	10	0	23	4·73	11 51
Thursday ..	26	299	6	36	6	10	0	23	5·73	12 12
Friday ..	27	300	6	37	6	9	0	23	6·73	12 33
Saturday ..	28	301	6	37	6	9	0	23	7·73	12 52
Sunday ..	29	302	6	37	6	8	0	23	8·73	13 13
Monday ..	30	303	6	37	6	7	0	23	9·73	13 33
Tuesday ..	31	304	6	38	6	7	0	22	10·73	13 53

Phases of the Moon—NOVEMBER 30 Days.

○ Full Moon ..... 5th, 0h. 6·5m. A.M. | ● New Moon .....19th, 5h. 36·4m. A.M.

☾ Last Quarte ....12th, 3h. 22·5m. P.M. | ☽ First Quarter.....26th, 1h. 45·0m P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′
Wednesday ..	1	305	6	38	6	6	0	22	11·73	14	12
Thursday ..	2	306	6	39	6	6	0	22	12·73	14	32
Friday ..	3	307	6	39	6	5	0	22	13·73	14	51
Saturday ..	4	308	6	40	6	5	0	22	14·73	15	10
Sunday ..	5	309	6	40	6	4	0	22	15·73	15	28
Monday ..	6	310	6	41	6	4	0	22	16·73	15	46
Tuesday ..	7	311	6	41	6	4	0	22	17·73	16	4
Wednesday ..	8	312	6	42	6	4	0	22	18·73	16	22
Thursday ..	9	313	6	42	6	3	0	23	19 73	16	40
Friday ..	10	314	6	43	6	3	0	23	20·73	17	57
Saturday ..	11	315	6	43	6	3	0	23	21·73	17	14
Sunday ..	12	316	6	44	6	2	0	23	22·73	17	30
Monday ..	13	317	6	44	6	2	0	23	23·73	17	47
Tuesday ..	14	318	6	45	6	1	0	23	24·73	18	3
Wednesday ..	15	319	6	45	6	1	0	23	25·73	18	19
Thursday ..	16	320	6	46	6	1	0	23	26·73	18	34
Friday ..	17	321	6	46	6	1	0	23	27·73	18	49
Saturday ..	18	322	6	47	6	0	0	23	28.73	19	4
Sunday ..	19	323	6	48	6	0	0	24	0·30	19	18
Monday ..	20	324	6	48	6	0	0	24	1·30	19	32
Tuesday ..	21	325	6	49	6	0	0	24	2·30	19	46
Wednesday ..	22	326	6	49	6	0	0	24	3·30	19	59
Thursday ..	23	327	6	50	6	0	0	25	4·30	20	12
Friday ..	24	328	6	51	6	0	0	25	5·30	20	25
Saturday ..	25	329	6	51	6	0	0	25	6·30	20	37
Sunday ..	26	330	6	52	6	0	0	25	7·30	20	49
Monday ..	27	331	6	52	6	0	0	26	8·30	21	0
Tuesday ..	28	332	6	53	6	0	0	26	9·30	21	11
Wednesday ..	29	333	6	54	6	0	0	26	10·30	21	22
Thursday ..	30	334	6	54	6	0	0	27	11·30	21	32

Phases of the Moon—DECEMBER 31 Days.

○ Full Moon..... 4th, 4h. 53·6m. P.M. | ● New Moon.....18th, 5h. 50·0m. P.M.

☽ First Quarter ...11th, 10h. 10·7m. P.M. | ☽ Last Quarter ....26th, 11h. 23·1m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° S. ′
Friday ..	1	335	6	55	6	0	0	28	12·30	21 42
Saturday ..	2	336	6	55	6	0	0	28	13·30	21 51
Sunday ..	3	337	6	56	6	0	0	28	14·30	22 0
Monday ..	4	338	6	57	6	0	0	29	15·30	22 9
Tuesday ..	5	339	6	57	6	0	0	29	16·30	22 17
Wednesday ..	6	340	6	58	6	1	0	30	17·30	22 25
Thursday ..	7	341	6	59	6	1	0	30	18·30	22 32
Friday ..	8	342	6	59	6	1	0	30	19·30	22 39
Saturday ..	9	343	7	0	6	1	0	31	20 30	22 45
Sunday ..	10	344	7	0	6	2	0	31	21·30	22 51
Monday ..	11	345	7	1	6	2	0	32	22·30	22 57
Tuesday ..	12	346	7	2	6	2	0	32	23·30	23 2
Wednesday ..	13	347	7	2	6	3	0	33	24·30	23 6
Thursday ..	14	348	7	3	6	3	0	33	25·30	23 10
Friday ..	15	349	7	3	6	3	0	34	26·30	23 14
Saturday ..	16	350	7	4	6	4	0	34	27·30	23 17
Sunday ..	17	351	7	4	6	4	0	35	28·30	23 20
Monday ..	18	352	7	5	6	5	0	35	29·36	23 22
Tuesday ..	19	353	7	5	6	5	0	36	0·79	23 24
Wednesday ..	20	354	7	6	6	6	0	36	1·79	23 25
Thursday ..	21	355	7	7	6	6	0	37	2·79	23 26
Friday ..	22	356	7	7	6	6	0	37	3·79	23 27
Saturday ..	23	357	7	8	6	7	0	38	4·79	23 27
Sunday ..	24	358	7	8	6	7	0	38	5·79	23 26
Monday ..	25	359	7	9	6	8	0	39	6·79	23 25
Tuesday ..	26	360	7	9	6	9	0	39	7·79	23 24
Wednesday ..	27	361	7	10	6	9	0	40	8·79	23 22
Thursday ..	28	362	7	10	6	10	0	40	9·79	23 19
Friday ..	29	363	7	11	6	10	0	41	10·79	23 16
Saturday ..	30	364	7	11	6	11	0	41	11·79	23 13
Sunday ..	31	365	7	11	6	11	0	42	12·79	23 9

CALENDAR FOR 1923.

January.

S.	7	14	21	28
M.	1	8	15	22	29
Tu.	2	9	16	23	30
W.	3	10	17	24	31
Th.	4	11	18	25
F.	5	12	19	26
S.	6	13	20	27

February.

S.	4	11	18	25
M.	5	12	19	26
Tu.	6	13	20	27
W.	7	14	21	28
Th.	1	8	15	22
F.	2	9	16	23
S.	3	10	17	24

March.

S.	4	11	18	25
M.	5	12	19	26
Tu.	6	13	20	27
W.	7	14	21	28
Th.	1	8	15	22	29
F.	2	9	16	23	30
S.	3	10	17	24	31

April.

S.	1	8	15	22	29
M.	2	9	16	23	30
Tu.	3	10	17	24
W.	4	11	18	25
Th.	5	12	19	26
F.	6	13	20	27
S.	7	14	21	28

May.

S.	6	13	20	27
M.	7	14	21	28
Tu.	1	8	15	22	29
W.	2	9	16	23	30
Th.	3	10	17	24	31
F.	4	11	18	25
S.	5	12	19	26

June.

S.	3	10	17	24
M.	4	11	18	25
Tu.	5	12	19	26
W.	6	13	20	27
Th	7	14	21	28
F.	1	8	15	22	29
S	2	9	16	23	30

July.

S	1	8	15	22	29
M.	2	9	16	23	30
Tu.	3	10	17	24	31
W.	4	11	18	25
Th.	5	12	19	26
F.	6	13	20	27
S.	7	14	21	28

August.

S.	5	12	19	26
M.	6	13	20	27
Tu.	7	14	21	28
W.	1	8	15	22	29
Th.	2	9	16	23	30
F.	3	10	17	24	31
S.	4	11	18	25

September.

S.	2	9	16	23	30
M.	3	10	17	24
Tu.	4	11	18	25
W.	5	12	19	26
Th.	6	13	20	27
F.	7	14	21	28
S.	1	8	15	22	29

October.

S.	7	14	21	28
M.	1	8	15	22	29
Tu.	2	9	16	23	30
W.	3	10	17	24	31
Th.	4	11	18	25
F.	5	12	19	26
S.	6	13	20	27

November.

S.	4	11	18	25
M.	5	12	19	26
Tu.	6	13	20	27
W.	7	14	21	28
Th.	1	8	15	22	29
F.	2	9	16	23	30
S.	3	10	17	24

December.

S.	2	9	16	23	30
M.	3	10	17	24	31
Tu.	4	11	18	25
W.	5	12	19	26
Th.	6	13	20	27
F.	7	14	21	28
S.	1	8	15	22	29

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India in 1921.

The year 1921 will always be remembered as one of the most puzzling in the political history of India.

The great scheme of reforms embodied in the Government of India Act, 1919, came into operation. The first elections held under this measure were carried out towards the close of the previous year. The party led by Mr Ghandy having gone into political outlawry, they boycotted the elections. This did not prevent the full complement of members being elected to the Imperial and Provincial Councils, on the contrary it ensured that the men chosen accepted in full the principle of the reforms and were anxious to work them. The Council of State and the Imperial Legislative Assembly, with several of the provincial Councils, were formally opened by His Royal Highness the Duke of Connaught during a visit to India where he brought a special message of good will and encouragement from His Majesty the King-Emperor. These Councils at once settled down to business in a spirit of serious patriotism. Their task was not always an easy one, especially in the Imperial Legislative Assembly, where largely in consequence of the wanton declaration of war by Afghanistan in 1919 the finances were so seriously affected that large additional taxes had to be voted. But these and other problems were faced in a spirit of real responsibility, the Councils not only did the work they had to do well, but began the building of solid conventions which will assist all future progress.

But whilst the Councils were bending their energies to this constructive work, and Ministers were exploring the ground covered by their portfolios, the Non-co operation Party laboured unceasingly to make the established, or any form of Government impossible. The boycott movement, in all its constructive schemes, failed; few relinquished titles, after a period of fermentation students returned to their educational institutions, Government servants remained at their posts. On the constructive side of non-co-operation, the use of the hand-spinning wheel, or charka, which Mr Ghandy treated as the symbol of fitness of India for swaraj, or self-government, had a wide vogue, but the economic barrenness of hand-spinning, at which a skilled worker can earn only a few annas a day, inevitably provoked a reaction and towards the close of the year Mr. Ghandy had to bewail the falling off in the sales of khadi, or hand-woven cloth. And whilst Mr. Ghandy preached his doctrine of non-violence, some of his followers were bound by no such limitations. There was an ugly riot in Malegaon, a small town in the Bombay Deccan, directly attributable to the non-co-operation movement and disturbances at Dharwar, also in the Bombay Presidency.

The Indian Moslems were unceasingly lashed into opposition by the Khilafat workers, led by Mr. Mahomed Ali and Mr. Shaukat Ali, exploiting the external and internal troubles of Turkey. These culminated in a grave outbreak of the Moplahs of Malabar. Descendants from Arab settlers, always prone to fanatical violence, the Moplahs broke into open rebellion. They cut communications, they plundered right and left; they murdered a few Englishmen and many Hindus, other Hindus escaping with their lives by accepting forcible conversion to Mahomedanism. Living for the most part in country with few roads and large areas of almost trackless jungle, the Moplahs offered a considerable resistance to the forces despatched against them, and although the back of the rebellion was speedily broken, it was not entirely suppressed by the end of the year.

The Moplah rising, with its brutal crusade against the Hindus, opened the eyes of many to the certain sequelae of a lawless movement. After great patience, the Government instituted proceedings against Mr Mahomed Ali, Mr. Shaukat Ali and a few others for sedition, and the Alis were convicted and sentenced to two years imprisonment. But notwithstanding these experiences, the non-co-operation movement continued with great activity throughout the latter part of the year, being specially directed to the boycott of all foreign cloth, the spread of the spinning wheel, and the prevention of drinking by picketting the liquor shops, and was the direct cause of serious riots in Bombay City in November.

India is therefore confronted by two forces. The intelligentsia of the country, mobilised in the constitutional bodies, are working steadily, in full harmony with the executive, for the better government of India. Outside the constitutional bodies the Non-co-operation party is active in working for the overthrow of the established government, without the vaguest plan of what is to take its place. So far the utmost efforts of the disruptionists have failed to produce any effect on the Government and the administration. There are many signs that the intelligence of the country is revolting in an increasing degree from the political sterility of non-co-operation and the certainty of a devastating chaos if it attains any considerable measure of success. Yet at the same time disturbances in more than one centre show whither this campaign of lawlessness leads; the Moplah rising is a sinister warning of the inevitable result of even temporarily and in a limited area overthrowing authority in a country where racial differences and religious antagonisms are so acute.

Amidst these political distractions India has made substantial recovery from the economic malaise which followed the war. After two famines in three years—1918 and 1920—the rains of the year were abundant and the harvest good. Trade and industry revived, though the complete recovery of Indian trade is dependent on the re-establishment of the buying power of Europe and the collapse of the German mark caused anxiety.

The History of India in Outline.

No history of India can be proportionate, and the briefest summary must suffer from the same defect. Even a wholesale acceptance as history of mythology, tradition, and folklore will not make good, though it makes picturesque, the many gaps that exist in the early history of India: and, though the labours of modern geographers and archæologists have been amazingly fruitful, it cannot be expected that these gaps will ever be filled to any appreciable extent. Approximate accuracy in chronology and an outline of dynastic facts are all that the student can look for up to the time of Alexander, though the briefest excursion into the by-ways of history will reveal to him many alluring and mysterious fields for speculation. There are, for example, to this day castes that believe they sprang originally from the loins of a being who landed "from an impossible boat on the shores of a nighly improbable sea"; and the great epic poems contain plentiful statements equally difficult of reconciliation with modern notions of history as a science. But from the Jataka stories and the Puranas, much valuable information is to be obtained, and, for the benefit of those unable to go to these and other original sources, it has been distilled by a number of writers.

The orthodox Hindu begins the political history of India more than 3,000 years before Christ, with the war waged on the banks of the Jumna between the sons of Kuru and the sons of Pandu; but the modern critic prefers to omit several of those remote centuries and to take 600 B. C.; or thereabouts, as his starting point. At that time much of the country was covered with forest, but the Aryan races, who had entered India from the north, had established in parts a form of civilization far superior to that of the aboriginal savages, and to this day there survive cities, like Benares, founded by those invaders. In like manner the Dravidian invaders from an unknown land, who overran the Deccan and the Southern part of the Peninsula, crushed the aborigines, and at a much later period, were themselves subdued by the Aryans. Of these two civilizing forces, the Aryan is the better known, and of the Aryan kingdoms the first of which there is authentic record is that of Magadha, or Bihar, on the Ganges. It was in, or near, this powerful kingdom that Jainism and Buddhism had their origin, and the fifth King of Magadha, Bimbisara by name, was the friend and patron of Gautama Buddha. The King mentioned was a contemporary of Darius, autocrat of Persia (521 to 485 B. C.) who annexed the Indus valley and formed from his conquest an Indian satrapy which paid as tribute the equivalent of about one million sterling. Detailed history, however, does not become possible until the invasion of Alexander in 326 B.C.

Alexander the Great.

That great soldier had crossed the Hindu Kush in the previous year and had captured Aornos, on the Upper Indus. In the spring of 326 he crossed the river at Ohind, received the submission of the King of Taxila, and marched against Porus who ruled the fertile country between the rivers Hydaspes (Jhelum) and Akesines (Chenab). The Macedonian carried all before him, defeating Porus at the battle of the Hydaspes, and crossing the Chenab and Ravi. But at the River Hyphasis (Bias) his weary troops mutinied, and Alexander was forced to turn back and retire to the Jhelum where a fleet to sail down the rivers to the sea was nearly ready. The wonderful story of Alexander's march through Mekran and Persia to Babylon, and of the voyage of Nearchus up the Persian Gulf is the climax to the narrative of the invasion but is not part of the history of India. Alexander had stayed nineteen months in India and left behind him officers to carry on the Government of the kingdoms he had conquered: but his death at Babylon, in 323, destroyed the fruits of what has to be regarded as nothing but a brilliant raid, and within two years his successors were obliged to leave the Indian provinces, heavily scarred by war but not hellenized.

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta who was an illegitimate member of the Royal Family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount Sovereign of India (321 B. C.) with his capital at Pataliputra, the modern Patna and Bankipore. Of Chandragupta's court and administration a very full account is preserved in the fragments that remain of the history compiled by Megasthenes, the ambassador sent to India by Seleucus. His memorable reign ended in 297 B. C. when he was succeeded by his son Bindusara, who in his turn was succeeded by Asoka (269—231 B. C.) who recorded the events of his reign in numerous inscriptions. This king, in an unusually bloody war, added to his dominions the kingdom of Kalinga (the Northern Circars) and then becoming a convert to Buddhism, resolved for the future to abstain from conquest by force of arms. The consequences of the conversion of Asoka were amazing. He was not intolerant of other religions, and did not endeavour to force his creed on his "children". But he initiated measures for the propagation of his doctrine with the result that "Buddhism, which had hitherto been a merely local sect in the valley of the Ganges, was transformed into one of the greatest religions of the world—the greatest, probably, if measured by the number of adherents. This is Asoka's claim to be remembered; this it is which makes his reign an epoch, not only in the history of India, but in that of the world." The wording of his edicts reveal him as a great king as well as a great missionary, and it is to be hoped that the excavations now being carried on in the ruins of his palace may throw yet more light on his character and times. On his death the Maurya kingdom fell to pieces. Even during his reign there had been signs of new forces at work on the borderland of India, where the inde-

pendent kingdoms of Bactria and Parthia had been formed, and subsequent to it there were frequent Greek raids into India. The Greeks in Bactria, however, could not withstand the overwhelming force of the westward migration of the Yuch-chi horde, which, in the first century A. D., also ousted the Indo-Parthian kings from Afghanistan and North-Western India.

The first of these Yuch-chi kings to annex a part of India was Kadphises II (A. D. 85—125), who had been defeated in a war with China, but crossed the Indus and consolidated his power eastward as far as Benares. His son Kanishka (whose date is much disputed) left a name which to Buddhists stands second only to that of Asoka. He greatly extended the boundaries of his empire in the North, and made Peshawar his capital. Under him the power of the Kushan clan of the Yuch-chi reached its zenith and did not begin to decay until the end of the second century, concurrently with the rise in middle India of the Andhra dynasty which constructed the Amaravati stupa, "one of the most elaborate and precious monuments of piety ever raised by man."

The Gupta Dynasty.

Early in the fourth century there arose, at Pataliputra, the Gupta dynasty which proved of great importance. Its founder was a local chief, his son Samudragupta, who ruled for some fifty years from A.D. 326, was a king of the greatest distinction. His aim of subduing all India was not indeed fulfilled but he was able to exact tribute from the kingdoms of the South and even from Ceylon, and, in addition to being a warrior, he was a patron of the arts and of Sanskrit literature. The rule of his son, Chandragupta, was equally distinguished and is commemorated in an inscription on the famous iron pillar near Delhi, as well as in the writings of the Chinese pilgrim Fa-hien who pays a great tribute to the equitable administration of the country. It was not until the middle of the fifth century that the fortunes of the Gupta dynasty began to wane—in face of the onset of the White Huns from Central Asia—and by 480 the dynasty had disappeared. The following century all over India was one of great confusion, apparently marked only by the rise and fall of petty kingdoms, until a monarch arose, in A.D. 606, capable of consolidating an Empire. This was the Emperor Harsha who, from Thanasar near Ambala, conquered Northern India and extended his territory South to the Nerbudda. Imitating Asoka in many ways, this Emperor yet "felt no embarrassment in paying adoration in turn to Siva, the Sun, and Buddha at a great public ceremonial." Of his times a graphic picture has been handed down in the work of a Chinese "Master of the Law," Hiuen Tsiang by name. Harsha was the last native paramount sovereign of Northern India; on his death in 648 his throne was usurped by a Minister, whose treacherous conduct towards an embassy from China was quickly avenged, and the kingdom so laboriously established lapsed into a state of internecine strife which lasted for a century and a half.

The Andhras and Rajputs.

In the meantime in Southern India the Andhras had attained to great prosperity and carried on a considerable trade with Greece, Egypt and Rome, as well as with the East Their domination ended in the fifth century A.D. and a number of new dynasties, of which the Pallavas were the most important, began to appear. The Pallavas made way in turn for the Chalukyas, who for two centuries remained the most important Deccan dynasty, one branch uniting with the Cholas. But the fortunes of the Southern dynasties are so involved, and in many cases so little known; that to recount them briefly is impossible. Few names of note stand out from the record except those of Vikramaditya (11th century) and a few of the later Hindu rulers who made a stand against the growing power of Islam, of the rise of which an account is given below. In fact the history of mediæval India is singularly devoid of unity. Northern India was in a state of chaos from about 650 to 950 A.D. not unlike that which prevailed in Europe of that time, and materials for the history of these centuries are very scanty. In the absence of any powerful rulers the jungle began to gain back what had been wrested from it: ancient capitals fell into ruins from which in some cases they have not even yet been disturbed, and the aborigines and various foreign tribes began to assert themselves so successfully that the Aryan element was chiefly confined to the Doab and the Eastern Punjab. It is not therefore so much for the political as for the religious and social history of this anarchical period that one must look. And the greatest event—if a slow process may be called an event—of the middle ages was the transition from tribe to caste, the final disappearance of the old four-fold division of Brahmans; Kshattriyas, Vaisyas, and Sudras, and the formation of the new division of pure and impure largely resting upon a classification of occupations. But this social change was only a part of the development of the Hindu religion into a form which would include in its embrace the many barbarians and foreigners in the country who were outside it. The great political event of the period was the rise of the Rajputs as warriors in the place of the Kshattriyas. Their origin is obscure but they appeared in the 8th century and spread, from their two original homes in Rajputana and Oudh, into the Punjab, Kashmir, and the Central Himalayas, assimilating a number of fighting clans and binding them together with a common code. At this time Kashmir was a small kingdom which exercised an influence on India wholly disproportionate to its size. The only other kingdom of importance was that of Kanauj—in the Doab and Southern Oudh—which still retained some of the power to which it had reached in the days of Harsha, and of which the renown extended to China and Arabia.

With the end of the period of anarchy, the political history of India centres round the Rajputs. One clan founded the kingdom of Gujarat, another held Malwa, another (the Chauhans) founded a kingdom of which Ajmer was the capital, and so on. Kanauj fell into the hands of the Rathors (circ 1040 A.D.) and the dynasty then founded by that branch of the Gaharwars of Benares became one of the most famous in India. Later in the same century the Chauhans were united; and by

1163 one of them could boast that he had conquered all the country from the Vindhyas to the Himalayas, including Delhi already a fortress a hundred years old. The son of this conqueror was Prithwi Raj, the champion of the Hindus against the Mahomedans. With his death in battle (1192) ends the golden age of the new civilization that had been evolved out of chaos; and of the greatness of that age there is a splendid memorial in the temples and forts of the Rajput states and in the two great philosophical systems of Sankaracharya (ninth century) and Ramanuja (twelfth century). The triumph of Hinduism had been achieved, it must be added, at the expense of Buddhism, which survived only in Magadha at the time of the Mahomedan conquest and speedily disappeared there before the new faith.

Mahomedan India.

The wave of Mahomedan invaders that eventually swept over the country first touched India, in Sind, less than a hundred years after the death of the Prophet in 632. But the first real contact was in the tenth century when a Turkish slave of a Persian ruler founded a kingdom at Ghazni, between Kabul and Kandahar. A descendant of his, Mahmud (967-1030) made repeated raids into the heart of India, capturing places so far apart as Multan, Kanauj, Gwalior, and Somnath in Kathiawar, but permanently occupying only a part of the Punjab. Enduring Mahomedan rule was not established until the end of the twelfth century, by which time, from the little territory of Ghor, there had arisen one Mahomed Ghori capable of carving out a kingdom stretching from Peshawar to the Bay of Bengal. Prithwi Raj, the Chauhan ruler of Delhi and Ajmer, made a brave stand against, and once defeated, one of the armies of this ruler, but was himself defeated in the following year. Mahomed Ghori was murdered at Lahore (1206) and his vast kingdom, which had been governed by satraps, was split up into what were practically independent sovereignties. Of these satraps, Qutb-ud-din, the slave ruler of Delhi and Lahore, was the most famous, and is remembered by the great mosque he built near the modern Delhi. Between his rule and that of the Mughals, which began in 1526, only a few of the many Kings who governed and fought and built beautiful buildings, stand out with distinction. One of these was Ala-ud-din (1296-1316), whose many expeditions to the south much weakened the Hindu Kings, and who proved himself to be a capable administrator. Another was Firoz Shah, of the house of Tughlaq, whose administration was in many respects admirable, but which ended, on his abdication, in confusion. In the reign of his successor, Mahmud (1398-1413), the kingdom of Delhi went to pieces and India was for seven months at the mercy of the Turkish conqueror Taimur. It was the end of the fifteenth century before the kingdom, under Sikandar Lodi, began to recover. His son, Ibrahim, still further extended the kingdom that had been recreated, but was defeated by Babar, King of Kabul, at Panipat, near Delhi, in 1526, and there was then established in India the Mughal dynasty.

The Mahomedan dynasties that had ruled capital other than Delhi up to this date were of comparative unimportance, though some great men appeared among them. In Gujarat, for example, Ahmad Shah, the founder of Ahmedabad, showed himself a good ruler and builder as well as a good soldier, though his grandson, Mahmud Shah Begara, was a greater ruler—acquiring fame at sea as well as on land. In the South various kings of the Bahmani dynasty made names for themselves, especially in the long wars they waged on the new Hindu kingdom that had arisen which had its capital at Vijayanagar. Of importance also was Adil Khan, a Turk, who founded (1490) the Bijapur dynasty of Adil Shahis. It was one of his successors who crushed the Vijayanagar dynasty, and built the great mosque for which Bijapur is famous.

The Mughal Empire.

As one draws near to modern times it becomes impossible to present anything like a coherent and consecutive account of the growth of India as a whole. Detached threads in the story have to be picked up one by one and followed to their ending, and although the sixteenth century saw the first European settlements in India, it will be convenient here to continue the narrative of Mahomedan India almost to the end of the Mughal Empire. How Babar gained Delhi has already been told. His son, Humayun, greatly extended his kingdom, but was eventually defeated (1540) and driven into exile by Sher Khan, an Afghan of great capabilities, whose short reign ended in 1545. The Sur dynasty thus founded by Sher Khan lasted another ten years when Humayun having snatched Kabul from one of his brothers, was strong enough to win back part of his old kingdom. When Humayun died (1556) his eldest son, Akbar, was only 13 years old and was confronted by many rivals. Nor was Akbar well served, but his career of conquest was almost uninterrupted and by 1594 the whole of India North of the Nerbudda had bowed to his authority, and he subsequently entered the Deccan and captured Ahmednagar. This great ruler, who was as remarkable for his religious tolerance as for his military prowess, died in 1605, leaving behind him a record that has been surpassed by few. His son, Jehangir, who married the Persian lady Nur Jahan, ruled until 1627, bequeathing to an admiring posterity some notable buildings—the tomb of his father at Sikandra, part of the palace at Agra, and the palace and fortress of Lahore. His son, Shahjahan, was for many years occupied with wars in the Deccan, but found time to make his court of incredible magnificence and to build the most famous and beautiful of all tombs, the Taj Mahal, as well as the fort, palace and Juma Masjid at Delhi. The quarrels of his sons led to the deposition of Shahjahan by one of them, Aurangzeb, in 1658. This Emperor's rule was one of constant intrigue and fighting in every direction, the most important of his wars being a twenty-five years' struggle against the Marathas of the Deccan who, under the leadership of Sivaji, became a very powerful faction in Indian politics. His bigoted attitude towards Hinduism made Aurangzeb all the more anxious to establish his Empire on a firm basis in the south, but he was unable to hold his many conquests, and on his death (1707) the

Empire, for which his three sons were fighting, could not be held together. Internal disorder and Maratha encroachments continued during the reigns of his successors, and in 1739 a fresh danger appeared in the person of Nadir Shah, the Persian conqueror, who carried all before him. On his withdrawal, leaving Mahomed Shah on the throne, the old intrigues recommenced and the Marathas began to make the most of the opportunity offered to them by puppet rulers at Delhi and by almost universal discord throughout what had been the Mughal Empire. There is little to add to the history of Mahomedan India. Emperors continued to reign in name at Delhi up to the middle of the 19th century, but their territory and power had long since disappeared, being swallowed up either by the Marathas or by the British.

European Settlements.

The voyage of Vasco da Gama to India in 1498 was what turned the thoughts of the Portuguese to the formation of a great Empire in the East. That idea was soon realized, for, from 1500 onwards, constant expeditions were sent to India and the first two Viceroys in India—Almeida and Albuquerque—laid the foundations of a great Empire and of a great trade monopoly. Goa, taken in 1510, became the capital of Portuguese India and remains to this day in the hands of its captors, and the countless ruins of churches and forts on the shores of Western India, as also farther East at Malacca, testify to the zeal with which the Portuguese endeavoured to propagate their religion and to the care they took to defend their settlements. There were great soldiers and great missionaries among them—Albuquerque, da Cunha, da Castro in the former class, St. Francis Xavier in the latter. But the glory of Empire loses something of its lustre when it has to be paid for, and the constant drain of men and money from Portugal, necessitated by the attacks made on their possessions in India and Malaya, was found almost intolerable. The junction of Portugal with Spain, which lasted from 1580 to 1640, also tended to the downfall of the Eastern Empire and when Portugal became independent again, it was unequal to the task of competing in the East with the Dutch and English. The Dutch had little difficulty in wresting the greater part of their territory from the Portuguese, but the seventeenth century naval wars with England forced them to relax their hold upon the coast of India, and during the French wars between 1795 and 1811 England took all Holland's Eastern possessions, and the Dutch have left in India but few traces of their civilisation and of the once powerful East India Company of the Netherlands.

The first English attempts to reach India date from 1496 when Cabot tried to find the North-West passage, and these attempts were repeated all through the sixteenth century. The first Englishman to land in India is said to have been one Thomas Stephens (1579) who was followed by a number of merchant adventurers, but trade between the two countries really dates from 1600 when Elizabeth incorporated the East India Company which had been formed in London. Factories in India were founded only after Portuguese and Dutch opposition had been overcome, notably in the sea fight off Swally (Suvali) in 1612. The first factory, at Surat, was for many years the most important English foothold in the East. Its establishment was followed by others, including Fort St. George, Madras, (1640) and Hughli (1651). In the history of these early years of British enterprise in India the cession of Bombay (1661) as part of the dower of Catherine of Braganza stands out as a land-mark; it also illustrates the weakness of the Portuguese at that date, since in return the King of England undertook to protect the Portuguese in India against their foes—the Marathas and the Dutch. Cromwell, by his treaty of 1651, had already obtained from the Portuguese an acknowledgment of England's right to trade in the East; and that right was now threatened, not by the Portuguese, but by Sivaji and by the general disorder prevalent in India. Accordingly, in 1686, the Company turned its attention to acquiring territorial power, and announced its intention to establish such a policy of civil and military power, and create and secure such a large revenue.....as may be the foundation of a large, well-grounded, sure English dominion in India for all time to come. Not much came of this announcement for some time, and no stand could be made in Bengal against the depredations of Aurangzeb. The foundations of Calcutta (1690) could not be laid by Job Charnock until after a humiliating peace had been concluded with that Emperor, and, owing to the difficulties in which the Company found itself in England, there was little chance of any immediate change for the better. The union of the old East India Company with the new one which had been formed in rivalry to it took place in 1708, and for some years peaceful development followed; though Bombay was always exposed by sea to attacks from the pirates, who had many strongholds within easy reach of that port, and on land to attacks from the Marathas. The latter danger was felt also in Calcutta. Internal dangers were numerous and still more to be feared. More than one mutiny took place among the troops sent out from England, and rebellions like that led by Keigwin in Bombay threatened to stifle the infant settlements. The public health was bad and the rate of mortality was at times appalling. To cope with such conditions strong men were needed, and the Company was in this respect peculiarly fortunate; the long list of its servants, from Oxenden and Aungier to Hastings and Raffles, contains many names of men who proved themselves good rulers and far-sighted statesmen, the finest Empire-builders the world has known.

Attempts to compete with the English were made of course. But the schemes of the Emperor Charles VI to secure a share of the Indian trade were not much more successful than those made by Scotland, Denmark, Sweden, and Russia. By the French, who founded Pondicherry and Chandernagore towards the end of the 17th century, much more was achieved, as will be seen from the following outline of the development of British rule.

The French Wars.

When war broke out between England and France in 1744, the French had acquired a

strong position in Southern India, which had become independent of Delhi and was divided into three large States—Hyderabad, Tanjore, and Mysore—and a number of petty states under local chieftains. In the affairs of these States Dupleix, when Governor of Pondicherry, had intervened with success, and when Madras was captured by a French squadron, under La Bourdonnais (1746) Dupleix wished to hand it over to the Nawab of Arcot—a deputy of the Nizam's who ruled in the Carnatic. The French, however, kept Madras, repelling an attack by the disappointed Nawab as well as the British attempts to recapture it. The treaty of Aix-la-Chapelle restored Madras to the English. The fighting had shown the Indian powers the value of European troops, and this was again shown in the next French war (1750-54) when Clive achieved enduring fame by his capture and subsequent defence of Arcot. This war arose from Dupleix supporting candidates for the disputed successions at Arcot and Hyderabad while the English at Madras put forward their own nominees. One of Dupleix's officers, the Marquis de Bussy, persuaded the Nizam to take into his pay the army which had established his power, and in return the Northern Circars, between Orissa and Madras, was granted to the French. This territory, however, was captured by the English in the seven years' war (1756-63). Dupleix had by then been recalled to France. Lally, who had been sent to drive the English out of India, captured Fort St. David and invested Madras. But the victory which Colonel (Sir Eyre) Coote won at Wandiwash (1760) and the surrender of Pondicherry and Gingee put an end to the French ambitions of Empire in Southern India. Pondicherry passed more than once from the one nation to the other before settling down to its present existence as a French colony in miniature.

Battle of Plassey.

While the English were fighting the third French war in the South they became involved in grave difficulties in Bengal, where Siraj-ud-Daula had acceded to power. The headquarters of the English at Calcutta were threatened by that ruler who demanded they should surrender a refugee and should cease building fortifications. They refused and he marched against them with a large army. Some of the English took to their ships and made off down the river, the rest surrendered and were cast into the jail known as the "Black Hole." From this small and stifling room 23 persons, out of 146, came out alive the next day. Clive who was at Madras, immediately sailed for Calcutta with Admiral Watson's squadron, recaptured the town 1757), and, as war with the French had been proclaimed, proceeded to take Chandernagore. The Nawab Siraj-ud-Daula then took the side of the French, and Clive, putting forward Mir Jafar as candidate for the Nawab's throne, marched out with an army consisting of 900 Europeans, 2,000 sepoys and 8 pieces of artillery against the Nawab's host of over 50,000. The result was the historic battle of Plassey (June 23) in which Clive, after hesitating on the course to be pursued, routed the Nawab. Mir Jafar was put on the throne at Murshidabad, and the price of this honour was put at £2,340,000 in addition to the grant to the Company of the land round Calcutta now known as the District of the twenty-four Parganas. In the year after Plassey, Clive was appointed Governor of Bengal and in that capacity sent troops against the French in Madras and in person led a force against the Oudh army that was threatening Mir Jafar, in each case with success. From 1760 to 1765 Clive was in England. During his absence the Council at Calcutta deposed Mir Jafar and, for a price, put Mir Kasim in his place. This ruler moved his capital to Monghyr, organized an army, and began to intrigue with the Nawab Wazir of Oudh. He soon found, in a dispute over customs dues, an opportunity of quarrelling with the English and the first shots fired by his followers were the signal for a general rising in Bengal. About 200 Englishmen and a number of sepoys were massacred, but his trained regiments were defeated at Gheria and Oodeynullah, and Mir Kasim sought protection from the Nawab of Oudh. But in 1764, after quelling a sepoy mutiny in his own camp by blowing 24 ringleaders from the guns, Major (Sir Hector) Munro defeated the joint forces of Shah Alam, the Mughal Emperor, and the Nawab of Oudh in the battle of Buxar. In 1765 Clive (now Baron Clive of Plassey) returned as Governor. "Two landmarks stand out in his policy. First, he sought the substance, although not the name, of territorial power, under the fiction of a grant from the Mughal Emperor. Second, he desired to purify the Company's service, by prohibiting illicit gains, and by guaranteeing a reasonable pay from honest sources. In neither respect were his plans carried out by his immediate successors. But our efforts towards a sound administration date from this second Governorship of Clive, as our military supremacy dates from his victory at Plassey." Before Clive left India, in 1767, he had readjusted the divisions of Northern India and had set up a system of Government in Bengal by which the English received the revenues and maintained the army while the criminal jurisdiction was vested in the Nawab. The performance of his second task, the purification of the Company's service, was hotly opposed but carried out. He died in 1774 by his own hand, the House of Commons having in the previous year censured him, though admitting that he did render "great and meritorious services to his country."

Warren Hastings.

The dual system of government that Clive had set up proved a failure and Warren Hastings was appointed Governor, in 1772, to carry out the reforms settled by the Court of Directors which were to give them the entire care and administration of the revenues. Thus Hastings had to undertake the administrative organization of India, and, in spite of the factious attitude of Philip Francis, with whom he fought a duel and of other members of his Council, he reorganized the civil service, reformed the system of revenue collection, greatly improved the financial position of the Company, and created courts of justice and some semblance of a police force. From 1772 to 1774 he was Governor of Bengal, and from 1774 to 1775

he was the first Governor-General, nominated under an Act of Parliament passed in the previous year. His financial reforms, and the forced contributions he enacted from the rebellious Chet Singh and the Begam of Oudh, were interpreted in England as acts of oppression and formed, together with his action in the trial of Nuncomar for forgery, the basis of his seven years' trial before the House of Lords which ended in a verdict of not guilty on all the charges. But there is much more for which his administration is justly famous. The recovery of the Marathas from their defeat at Panipat was the cardinal factor that influenced his policy towards the native states. One frontier was closed against Maratha invasion by the loan of a British brigade to the Nawab Wazir of Oudh, for his war against the Rohillas, who were intriguing with the Marathas. In Western India he found himself committed to the two Maratha wars (1775-82) owing to the ambition of the Bombay Government to place its own nominee on the throne of the Peshwa at Poona, and the Bengal troops that he sent over made amends, by the conquest of Gujrat and the capture of Gwalior, for the disgrace of Wadgaon where the Marathas overpowered a Bombay army. In the South—where interference from Madras had already led (1769) to what is known as the first Mysore war, a disastrous campaign against Hyder Ali and the Nizam—he found the Madras Government again in conflict with those two potentates. The Nizam he won over by diplomacy, but against Hyder Ali he had to despatch a Bengal army under Sir Eyre Coote. Hyder Ali died in 1782 and two years later a treaty was made with his son Tipu. It was in these acts of intervention in distant provinces that Hastings showed to best advantage as a great and courageous man, cautious, but swift in action when required. He was succeeded, after an interregnum, by Lord Cornwallis (1786-93) who built on the foundations of civil administration laid by Hastings, by entrusting criminal jurisdiction to Europeans and establishing an Appellate Court of Criminal Judicature at Calcutta. In the Civil Service he separated the functions of the District Collector and Judge and organized the "writers" and "merchants" of the Company into an administrative Civil Service. This system was subsequently extended to Madras and Bombay. Lord Cornwallis is better known for his introduction, on orders from England, of the Permanent Settlement in Bengal. (See article on Land Revenue). A third Mysore war was waged during his tenure of office which ended in the submission of Tipu Sultan. Sir John Shore (Lord Teignmouth), an experienced Civil Servant, succeeded Lord Cornwallis, and, in 1798, was followed by Lord Wellesley, the friend of Pitt, whose projects were to change the map of India.

Lord Wellesley's Policy

The French in general, and "the Corsican" in particular, were the enemy most to be dreaded for a few years before Lord Wellesley took up his duties in India, and he formed the scheme of definitively ending French schemes in Asia by placing himself at the head of a great Indian confederacy. He started by obtaining from the Nawab of Oudh the cession of large tracts of territory in lieu of payments overdue as subsidies for British troops, he then won over the Nizam to the British side, and, after exposing the intrigues of Tipu Sultan with the French, embarked on the fourth Mysore war which ended (1799) in the fall of Seringapatam and the gallant death of Tipu. Part of Mysore, the Carnatic, and Tanjore roughly constituting the Madras Presidency of to-day then passed to British rule. The five Maratha powers—the Peshwa of Poona, the Gackwar of Baroda, Sindhia of Gwalior, Holkar of Indore and the Raja of Nagpur—had still to be brought into the British net. The Peshwa, after being defeated by Holkar, fled to British territory and signed the Treaty of Bassein which led to the third Maratha war (1802-04) as it was regarded by Sindhia and the Raja of Nagpur at a betrayal of Maratha independence. In this the most successful of British campaigns in India, Sir Arthur Wellesley (the Duke of Wellington) and General (Lord) Lake carries all before them, the one by his victories of Assaye and Argaum and the other at Aligad and Laswari. Later operations, such as Colonel Monson's retreat through Central India were less fortunate. The great acquisitions of territory made under Lord Wellesley proved so expensive that the Court of Directors, becoming impatient, sent out Lord Cornwallis a second time to make peace at any price. He, however, died soon after his arrival in India, and Sir George Barlow carried on the government (1805-7) until the arrival of a stronger ruler, Lord Minto. He managed to keep the peace in India for six years, and to add to British dominions by the conquest of Java and Mauritius. His foreign policy was marked by another new departure, inasmuch as he opened relations with the Punjab, Persia, and Afghanistan, and concluded a treaty with Ranjit Singh, at Lahore, which made that Sikh ruler the loyal ally of the British for life.

The successor of Lord Minto was Lord Moira, who found himself obliged almost at once to declare war on the Gurkhas of Nepal, who had been encroaching on British territory. After initial reverses, the English, under General Ochterlony, were successful and the Treaty of Sagauli (1816) was drawn up which defines British relations with Nepal to the present day. For this success Lord Moira was made Marquis of Hastings. In the same year he made preparations for the last Maratha war (1817-18) which was made necessary by the lawless conduct of the Pindaris, gangs of Pathan or Rohilla origin, whose chief patrons were the rulers of Native States. The large number of 120,000 that he collected for this purpose destroyed the Pindaris, annexed the dominions of the rebellious Peshwa of Poona, protected the Rajput States, made Sindhia enter upon a new treaty, and compelled Holkar to give up part of his territory. Thus Lord Hastings established the British power more firmly than ever, and when he resigned, in 1823, all the Native States outside the Punjab had become parts of the political system and British interests were permanently secured from the Persian Gulf to Singapore. Lord Amherst followed Lord Hastings, and his five years' rule (1823-28) are memorable for the first Burmese war and the capture of Bharatpur. The former opera-

tion was undertaken owing to the insolent demands and raids of the Burmese, and resulted in the Burmese ceding Assam, Aracan, and the coast of Martaban and their claims to the lower provinces. The capture of Bharatpur by Lord Combermere (1826) wiped out the repulse which General Lake had received there twenty years earlier. A disputed succession on this occasion led to the British intervention.

Social Reform.

A former Governor of Madras, Lord William Bentinck, was the next Governor-General. His epitaph by Macaulay, says: "He abolished cruel rites; he effaced humiliating distinctions; he gave liberty to the expression of public opinion; his constant study was to elevate the intellectual and moral character of the nations committed to his charge."

Some of his financial reforms, forced on him from England, and his widening of the gates by which educated Indians could enter the service of the Company, were most unpopular at the time, but were eclipsed by the acts he took for the abolition of *Sati*, or widow-burning, and the suppression—with the help of Captain Sleeman—of the professional hereditary assassins known as *Thags*. In 1832 he annexed Cachar, and, two years later, Coorg. The incompetence of the ruler of Mysore forced him to take that State also under British administration—where it remained until 1881. His rule was marked in other ways by the despatch of the first steamship that made the passage from Bombay to Suez, and by his settlement of the long educational controversy in favour of the advocates of instruction in English and the vernaculars. Lord William Bentinck left India (1835) with his programme of reforms unfinished. The new Charter Act of 1833 had brought to a close the commercial business of the Company and emphasized their position as rulers of an Indian Empire in trust for the Crown. By it the whole administration, as well as the legislation of the country, was placed in the hands of the Governor-General in Council, and authority was given to create a Presidency of Agra. Before his retirement Bentinck assumed the statutory title of Governor-General of India (1834), thus marking the progress of consolidation since Warren Hastings in 1774 became the first Governor-General of Fort William. Sir Charles Metcalfe, being senior member of Council, succeeded Lord William Bentinck, and during his short tenure of office carried into execution his predecessor's measures for giving entire liberty to the press.

Afghan Wars.

With the appointment of Lord Auckland as Governor-General (1836-42) there began a new era of war and conquest. Before leaving London he announced that he looked with exultation to the prospect of "promoting education and knowledge, and of extending the blessings of good Government and happiness to millions in India;" but his administration was almost exclusively comprised in a fatal expedition to Afghanistan, which dragged in its train the annexation of Sind, the Sikh wars, and the inclusion of Baluchistan in the protectorate of India. The first Afghan war was undertaken partly to counter the Russian advance in Central Asia and partly to place on the throne at Kabul the dethroned ruler Shah Shuja in place of Dost Mahomed. The latter object was easily attained (1839) and for two years Afghanistan remained in the military occupation of the British. In 1841 Sir Alexander Burnes was assassinated in Kabul and Sir William Macnaghten suffered the same fate in an interview with the son of Dost Mahomed. The British Commander in Kabul, Gen. Elphinstone, was old and feeble, and after two months' delay he led his army of 4,500 and 12,000 camp followers back towards India in the depth of winter. Between Kabul and Jallalabad the whole force perished, either at the hands of the Afghans or from cold, and Dr. Brydon was the only survivor who reached the latter city. Lord Ellenborough succeeded Lord Auckland and was persuaded to send an army of retribution to relieve Jallalabad. One force under Gen. Pollock relieved Jallalabad and marched on Kabul, while Gen. Nott, advancing from Kandahar, captured Ghazni and joined Pollock at Kabul (1842). The bazaar at Kabul was blown up, the prisoners rescued, and the army returned to India leaving Dost Mahomed to take undisputed possession of his throne. The drama ended with a bombastic proclamation from Lord Ellenborough and the parade through the Punjab of the (spurious) gates of Somnath taken from the tomb of Mahmud of Ghazni.

Sikh Wars.

Lord Ellenborough's other wars—the conquest of Sind by Sir Charles Napier and the suppression of an outbreak in Gwalior—were followed by his recall, and the appointment of Sir Henry (1st Lord) Hardinge to be Governor-General. A soldier Governor-General was not unacceptable, for it was felt that a trial of strength was imminent between the British and the remaining Hindu power in India, the Sikhs. Ranjit Singh, the founder of the Sikh Kingdom, had died in 1839, loyal to the end to the treaty he had made with Metcalfe thirty years earlier. He left no son capable of ruling, and the *khalsa*, or central council of the Sikh army, was burning to measure its strength with the British sepoys. The intrigues of two men, Lal Singh and Fej Singh, to obtain the supreme power led to their crossing the Sutlej and invading British territory. Sir Hugh Gough, the Commander-in-Chief, and the Governor-General hurried to the frontier, and within three weeks four pitched battles were fought—at Mudki, Ferozeshah, Aliwal and Sobraon. The Sikhs were driven across the Sutlej and Lahore surrendered to the British, but the province was not annexed. By the terms of peace the infant Dhuleep Singh was recognized as Rajah; Major Henry Lawrence was appointed Resident, to assist the Sikh Council of Regency, at Lahore; the Jullundur Doab was added to British territory; the Sikh army was limited; and a British force was sent to garrison the Punjab on behalf of the child Rajah. Lord Hardinge returned to England (1848) and was succeeded by Lord Dalhousie, the greatest of Indian proconsuls.

Dalhousie had only been in India a few months when the second Sikh war broke out. In the attack on the Sikh position at Chillianwala the British lost 2,400 officers and men

besides four guns and the colours of three regiments: but before reinforcements could arrive from England, bringing Sir Charles Napier as Commander-in-Chief, Lord Gough had restored his reputation by the victory of Gujrat which absolutely destroyed the Sikh army. As a consequence the Punjab was annexed and became a British province (1849), its pacification being so well carried out, under the two Lawrences that on the outbreak of the Mutiny eight years later it remained not only quiet but loyal. In 1852 Lord Dalhousie had again to embark on war, this time in Burma, owing to the ill-treatment of British merchants in Rangoon. The lower valley of the Irawaddy was occupied from Rangoon to Prome and annexed, under the name of Pegu, to those provinces that had been acquired in the first Burmese war. British territories were enlarged in many other directions during Lord Dalhousie's tenure of office. His "doctrine of lapse" by which British rule was substituted for Indian in States where continued misrule on the failure of a dynasty made this change possible, came into practice in the cases of Satara, Jhansi, and Nagpur (which last-named State became the Central Provinces) where the rulers died without leaving male heirs. Oudh was annexed on account of its misrule. Dalhousie left many other marks on India. He reformed the administration from top to bottom, founded the Public Works Department, initiated the railways, telegraphs and postal system, and completed the great Ganges canal. He also detached the Government of Bengal from the charge of the Governor-General, and summoned representatives of the local Governments to the deliberations of the Government of India. Finally, in education he laid down the lines of a department of public instruction and initiated more practical measures than those devised by his predecessors. It was his misfortune that the mutiny, which so swiftly followed his resignation, was by many critics in England attributed to his passion for change.

The Sepoy Mutiny.

Dalhousie was succeeded by Lord Canning in 1856, and in the following year the sepoys of the Bengal army mutinied and all the valley of the Ganges from Delhi to Patna rose in rebellion. The causes of this convulsion are difficult to estimate, but are probably to be found in the unrest which followed the progress of English civilisation; in the spreading of false rumours that the whole of India was to be subdued; in the confidence the sepoy troops had acquired in themselves under British leadership; and in the ambition of the educated classes to take a greater share in the government of the country. Added to this, there was in the deposed King of Delhi, Bahadur Shah, a centre of growing disaffection. Finally there was the story—not devoid of truth—that the cartridges for the new Enfield rifle were greased with fat that rendered them unclean for both Hindus and Mahomedans. And when the mutiny did break out it found the Army without many of its best officers who were employed in civil work, and the British troops reduced, in spite of Lord Dalhousie's warnings, below the number he considered essential for safety. On May 10 the sepoys at Meerut rose in mutiny, cut down a few Europeans, and, unchecked by the large European garrison, went off to Delhi where next morning the Mahomedans rose. From that centre the mutiny spread through the North-Western Provinces and Oudh into Lower Bengal. Risings in the Punjab were put down by Sir John Lawrence and his subordinates, who armed the Sikhs, and with their help reduced the sepoys, and Lawrence was subsequently able to send a strong body of Sikhs to aid in the siege of Delhi. The native armies of Madras and Bombay remained for the most part true to their colours. In Central India the contingents of some of the great chiefs joined the rebels, but Hyderabad was kept loyal by the influence of its minister, Sir Salar Jung.

The interest of the war centres round Delhi, Cawnpore and Lucknow, though in other places massacres and fighting occurred. The siege of Delhi began on June 8 when Sir Henry Barnard occupied the Ridge outside the town. Barnard died of cholera early in July, and Thomas Reed, who took his place, was obliged through illness to hand over the command to Archdale Wilson. In August Nicholson arrived with a reinforcement from the Punjab. In the meantime the rebel force in Delhi was constantly added to by the arrival of new bodies of mutineers; attacks were frequent and the losses heavy: cholera and sunstroke carried off many victims on the Ridge: and when the final assault was made in September the Delhi army could only parade 4,720 infantry, of whom 1,960 were Europeans. The arrival of siege guns made it possible to advance the batteries on September 8, and by the 13th a breach was made. On the following day three columns were led to the assault, a fourth being held in reserve. Over the ruins of the Kashmir Gate, blown in by Home and Salkeld, Col Campbell led his men and Nicholson formed up his troops within the walls. By nightfall the British, with a loss of nearly 1,206 killed and wounded, had only secured a toothold in the city. Six days' street fighting followed and Delhi was won; but the gallant Nicholson was killed at the head of a storming party. Bahadur Shah was taken prisoner, and his two sons were shot by Captain Hudson.

Massacre at Cawnpore.

At Cawnpore the sepoys mutinied on June 27 and found in Nana Sahib, the heir of the last Peshwa, a willing leader in spite of his former professions of loyalty. There a European force of 240 with six guns had to protect 870 non-combatants, and held out for 22 days, surrendering only on the guarantee of the Nana that they should have a safe conduct as far as Allahabad. They were embarking on the boats on the Ganges when fire was opened on them, the men being shot or hacked to pieces before the eyes of their wives and children and the women being mutilated and murdered in Cawnpore to which place they were taken back. Their bodies were thrown down a well just before Havelock, having defeated the Nana's forces, arrived to the relief. In Lucknow a small garrison held out in the Residency from July 2 to September 25 against tremendous odds and enduring the most fearful hardships. The relieving force, under Havelock and Outram, was itself invested, and the garrison was

not finally delivered until Sir Colin Campbell arrived in November. Fighting continued for 18 months in Oudh, which Sir Colin Campbell finally reduced, and in Central India, where Sir Hugh Rose waged a brilliant campaign against the disinherited Rani of Jhansi—who died at the head of her troops—and Tantia Topi.

Transfer to the Crown.

With the end of the mutiny there began a new era in India, strikingly marked at the outset by the Act for the Better Government of India (1858) which transferred the entire administration from the Company to the Crown. By that Act India was to be governed by, and in the name of, the Sovereign through a Secretary of State, assisted by a Council of fifteen members. At the same time the Governor-General received the title of Viceroy. The European troops of the Company, numbering about 24,000 officers and men were—greatly resenting the transfer—amalgamated with the Royal service, and the Indian Navy was abolished. On November 1, 1858, the Viceroy announced in Durbar at Allahabad that Queen Victoria had assumed the Government of India, and proclaimed a policy of justice and religious toleration. A principle already enunciated in the Charter Act of 1833 was reinforced, and all, of every race or creed, were to be admitted as far as possible to those offices in the Queen's service for which they might be qualified. The aim of the Government was to be the benefit of all her subjects in India—"In their prosperity will be our strength, in their contentment our security, and in their gratitude our best reward." Peace was proclaimed in July 1859, and in the cold weather Lord Canning went on tour in the northern provinces, to receive the homage of loyal chiefs and to assure them that the "policy of lapse" was at an end. A number of other important reforms marked the closing years of Canning's Viceroyalty. The India Councils Act (1861) augmented the Governor-General's Council, and the Councils of Madras and Bombay by adding non-official members, European and Indian, for legislative purposes only. By another Act of the same year High Courts of Judicature were constituted. To deal with the increased debt of India, Mr. James Wilson was sent from England to be Financial Member of Council, and to him are due the customs system, income tax, license duty, and State paper currency. The cares of office had broken down the Viceroy's health. Lady Canning died in 1862 and this hastened his departure for England where he died in June of that year. His successor, Lord Elgin, lived only a few months after his arrival in India, and was succeeded by Sir John (afterwards Lord) Lawrence, the "saviour of the Punjab."

Sir John Lawrence.

The chief task that fell to Sir John Lawrence was that of reorganising the Indian military system, and of reconstructing the Indian army. The latter task was carried out on the principle that in the Bengal army the proportion of Europeans to Indians in the infantry and cavalry should be one to two, and in the Madras and Bombay armies one to three: the artillery was to be almost wholly European. The re-organisation was carried out in spite of financial difficulties and the saddling of Indian revenues with the cost of a war in Abyssinia with which India had no direct concern; but operations in Bhutan were all the drain made on the army in India while the re-organising process was being carried on. Two severe famines—in Orissa (1866) and Bundelkhand and Upper Hindustan (1868-9)—occurred, while Sir John Lawrence was Viceroy, and he laid down the principle for the first time in Indian history, that the officers of the Government would be held personally responsible for taking every possible means to avert death by starvation. He also created the Irrigation Department under Col. (Sir Richard) Strachey. Two commercial crises of the time have to be noted. One seriously threatened the tea industry in Bengal. The other was the consequence of the wild gambling in shares of every description that took place in Bombay during the years of prosperity for the Indian cotton industry caused by the American Civil War. The "Share Mania," however, did no permanent harm to the trade of Bombay, but was, on the other hand, largely responsible for the series of splendid buildings begun in that city during the Governorship of Sir Bartle Frere. Sir John Lawrence retired in 1869, having passed through every grade of the service, from an Assistant Magistracy to the Viceroyalty. Lord Mayo, who succeeded him, created an Agricultural Department and introduced the system of Provincial Finance, thus fostering the impulse to local self-government. He also laid the foundation for the reform of the salt duties, thereby enabling his successors to abolish the inter-provincial customs lines. Unhappily his vast schemes for the development of the country by extending communications of every kind were not carried out to the full by him, for he was murdered in the convict settlement of the Andaman Islands, in 1872. Lord Northbrook (Viceroy 1872-6) had to exercise his abilities chiefly in the province of finance. A severe famine which threatened Lower Bengal in 1874 was successfully warded off by the organization of State relief and the importation of rice from Burma. The following year was notable for the deposition of the Gaikwar of Baroda for misgovernment, and for the tour through India of the Prince of Wales (the late King Edward VII). The visit of the Duke of Edinburgh to India when Lord Mayo was Viceroy had given great pleasure to those with whom he had come in touch, and had established a kind of personal link between India and the Crown. The Prince of Wales' tour aroused unprecedented enthusiasm for and loyalty to the British Raj, and further encouragement was given to the growth of this spirit when, in a durbar of great magnificence held on January 1st, 1877, on the famous Ridge at Delhi, Queen Victoria was proclaimed Empress of India. The Viceroy of that time, Lord Lytton, had, however, to deal with a situation of unusual difficulty. Two successive years of drought produced, in 1877-78, the worst famine India had known. The most strenuous exertions were made to mitigate its effects, and eight crores of rupees were spent in importing grain; but the loss of life was estimated at 5½ millions. At this time also Afghan affairs once more became prominent.

Second Afghan War.

The Amir, Sher Ali, was found to be intriguing with Russia and that fact, coupled with his repulse of a British mission led to the second Afghan War. The British forces advanced by three routes—the Khyber, the Kurram, and the Bolan—and gained all the important vantage points of Eastern Afghanistan. Sher Ali fled and a treaty was made with his son Yakub Khan, which was promptly broken by the murder of Sir Louis Cavagnari, who had been sent as English envoy to Kabul. Further operations were thus necessary, and Sir F. (now Lord) Roberts advanced on the capital and defeated the Afghans at Charasia. A rising of the tribes followed, in spite of Sir D. Stewart's victory at Ahmed Kheyl and his advance from Kabul to Kandahar. A pretender, Sirdar Ayub Khan, from Herat prevented the establishment of peace, defeated Gen. Burrows' brigade at Maiwand, and invested Kandahar. He was routed in turn by Sir F. Roberts who made a brilliant march from Kabul to Kandahar. After the British withdrawal fighting continued between Ayub Khan and Abdur Rahman, but the latter was left undisputed Amir of Afghanistan until his death in 1901

In the meantime Lord Lytton had resigned (1880) and Lord Ripon was appointed Viceroy by the new Liberal Government. Lord Ripon's administration is memorable for the freedom given to the Press by the repeal of the Vernacular Press Act, for his scheme of local self-government which developed municipal institutions, and for the attempt to extend the jurisdiction of the criminal courts in the Districts over European British subjects, independently of the race or nationality of the presiding judge. This attempt, which created a feeling among Europeans in India of great hostility to the Viceroy, ended in a compromise in 1884. Other reforms were the re-establishment of the Department of Revenue and Agriculture, the appointment of an Education Commission with a view to the spread of popular instruction on a broader basis, and the abolition by the Finance Minister (Sir Evelyn Baring, now Lord Cromer) of a number of customs duties. Lord Dufferin, who succeeded Lord Ripon in 1884, had to give his attention more to external than internal affairs: one of his first acts was to hold a durbar at Rawalpindi for the reception of the Amir of Afghanistan which resulted in the strengthening of British relations with that ruler. In 1885 a third Burmese war became necessary owing to the truculent attitude of King Thibaw and his intrigues with foreign Powers. The expedition, under General Prendergast, occupied Mandalay without difficulty and King Thibaw was exiled to Ratnagiri, where he died on 16th December 1916. His dominions of Upper Burma were annexed to British India on the 1st of January, 1886.

The Russian Menace.

Of greater importance at the time were the measures taken to meet a possible, and as it then appeared a probable, attack on India by Russia. These preparations, which cost over two million sterling, were hurried on because of a collision which occurred between Russian and Afghan troops at Penjdeh, during the delimitation of the Afghan frontier towards Central Asia, and which seemed likely to lead to a declaration of war by Great Britain. War was averted, but the Penjdeh incident had called attention to a menace that was to be felt for nearly a generation more; it had also served to elicit from the Princes of India an unanimous offer of troops and money in case of need. That offer bore fruit under the next Viceroy, Lord Lansdowne, when the present system of Imperial Service Troops was organised. Under Lord Lansdowne's rule also the defences of the North-Western Frontier were strengthened, on the advice of Sir Frederick (now Earl) Roberts, who was then Commander-in-Chief in India. Another form of precautionary measure against the continued aggression of Russia was taken by raising the annual subsidy paid by the Indian Government to the Amir from eight to twelve lakhs.

On the North-Eastern Frontier there occurred (1891) in the small State of Manipur a revolution against the Raja that necessitated an inquiry on the spot by Mr. Quinton, the Chief Commissioner of Assam. Mr. Quinton, the commander of his escort, and others, were treacherously murdered in a conference and the escort ignominiously retreated. This disgrace to British arms led to several attacks on frontier outposts which were brilliantly defeated. Manipur was occupied by British troops and the government of the State was reorganised under a Political Agent. Lord Lansdowne's term of office was distinguished by several other events, such as the passing of the Parliamentary Act (Lord Cross's Act, 1892), which increased the size of the Legislative Councils as well as the number of non-officials in them: legislation aimed at social and domestic reform among the Hindus: and the closing of the Indian Mints to the free coinage of silver (1893). In Burma great progress was made, under Sir Alexander Mackenzie, as Chief Commissioner: comparative order was established, and large schemes for the construction of railways, roads, and irrigation works were put in hand. (The Province was made a Lieutenant-Governorship in 1897).

Frontier Campaigns.

Lord Elgin, who succeeded Lord Lansdowne in 1894, was confronted at the outset with a deficit of Rs. 2¼ crores, due to the fall in exchange. (In 1895 the rupee fell as low as 1s. 1d.) To meet this the old five per cent. import duties were reimposed on a number of commodities, but not on cotton goods: and within the year the duty was extended to piece-goods, but not to yarn. The reorganisation of the Army, which involved the abolition of the old system of Presidency Armies, had hardly been carried out when a number of risings occurred along the North-West Frontier. In 1895 the British Agent in Chitral—which had come under British influence two years previously when Sir H. M. Durand had demarcated the southern and eastern boundaries of Afghanistan—was besieged and had to be rescued by an expeditionary force. Two years later the Wazirs, Swatis, and Mohmands attacked the British positions in Malakand, and the Afridis closed the Khyber Pass. Peace was only established after a prolonged campaign (the Tirah campaign) in which 40,000 troops were employed, and over 1,000 officers

and men had been lost. This was in itself a heavy burden on the finances of India, which was increased by the serious and widespread famine of 1896-97 and by the appearance in India of bubonic plague. The methods taken to prevent the spread of that disease led, in Bombay, to rioting, and elsewhere to the appearance in the vernacular press of seditious articles which made it necessary to make more stringent the law dealing with such writings.

Lord Curzon's Viceroyalty.

With famine and plague Lord Curzon also, who succeeded Lord Elgin in 1899, had to deal. In 1901 the cycle of bad harvests came to an end; but plague increased, and in 1904 deaths from it were returned at over one million. Of the many problems to which Lord Curzon directed his attention, only a few can be mentioned here: some indeed claim that his greatest work in India was not to be found in any one department but was in fact the general gearing up of the administration which he achieved by his unceasing energy and personal example of strenuous work. He had at once to turn his attention to the North-West Frontier. The British garrisons beyond our boundary were gradually withdrawn and replaced by tribal levies, and British forces were concentrated in British territory behind them as a support. An attempt was made to check the arms traffic and work on strategic railways was pushed forward. The fact that in seven years he only spent a quarter of a million upon repressive measures and only found it necessary to institute one blockade (against the Mahsud Waziris) is the justification of this policy of compromise between the Lawrence and Forward schools of thought. In 1901 the trans-Indus districts of the Punjab were separated from that Province, and together with the political charges of the Malakand, the Khyber, Kurram, Tochi, and Wana were formed into the new North-West Frontier Province, under a Chief Commissioner directly responsible to the Government of India. That year also witnessed the death of Abdur Rahman, the Amir of Afghanistan, and the establishment of an understanding with his successor Habibullah. In 1904 the attitude of the Dalai Lama of Tibet being pro-Russian and anti-British, it became necessary to send an expedition to Lhasa under Colonel (Sir Francis) Younghusband. The Dalai Lama abdicated and a treaty was concluded with his successor.

In his first year of office Lord Curzon passed the Act which, in accordance with the recommendations of the Fowler Commission, practically fixed the value of the rupee at 1*s.* 4*d.*, and in 1900 a Gold Reserve fund was created. The educational reforms that marked this Viceroyalty are dealt with elsewhere: chief among them was the Act of 1904 reorganising the governing bodies of Indian Universities. Under the head of agrarian reform must be mentioned the Punjab Land Alienation Act, designed to free the cultivators of the soil from the clutches of money-lenders, and the institution of Agricultural banks. The efficiency of the Army was increased (Lord Kitchener was Commander-in-Chief) by the re-armament of the Indian Army, the strengthening of the artillery, and the reorganisation of the transport service. In his relations with the Feudatory Chiefs, Lord Curzon emphasized their position as partners in administration, and he founded the Imperial Cadet Corps to give a military education to the sons of ruling and aristocratic families. In 1902 the British Government obtained from the Nizam a perpetual lease of the Assigned Districts of Berar in return for an annual payment of 25 lakhs The accession of King Edward VII was proclaimed in a splendid Durbar on January 1, 1903. In 1904 Lord Curzon returned to England for a few months but was re-appointed to a second term of office, Lord Ampthill, Governor of Madras, having acted as Viceroy during his absence. The chief act of this second term was the partition of Bengal and the creation of a new Province of Eastern Bengal and Assam—a reform, designed to remove the systematic neglect of the trans-Gangetic areas of Bengal, which evoked bitter and prolonged criticism. In 1905 Lord Curzon resigned, being unable to accept the proposals of Lord Kitchener for the re-adjustment of relations between the Army headquarters and the Military Department of the Government, and being unable to obtain the support of the Home Government. Lord Curzon was succeeded by **Lord Minto**, the grandson of a former Governor-General. It was a stormy heritage to which Lord Minto succeeded, for the unrest which had long been noticed developed in one direction into open sedition. The occasion of the outburst in Bengal was the partition of that province. The causes of the flood of seditious writings and speeches, of the many attempts at assassination, and of the boycott of British goods are less easily definable. The mainspring of the unrest was "a deep-rooted antagonism to all the principles upon which Western society, especially in a democratic country like England, has been built up."

Outside Bengal attempts to quell the disaffection by the ordinary law were fairly successful. But scarcely any province was free from disorder of some kind and, though recourse was had to the deportation of persons without reason assigned under an Act of 1818, special Acts had to be passed to meet the situation, *viz*:— an Explosives Act, a Prevention of Seditious Meetings Act, and a Criminal Law Amendment Act which provides for a magisterial inquiry in private and a trial before three judges of the High Court without a jury. Concurrently with these legislative measures steps were taken to extend representative institutions. In 1907 a Hindu and a Mahomedan were appointed to the Secretary of State's Council, and in 1909 a Hindu was appointed for the first time to the Viceroy's Council. The Indian Councils Act of 1909 carried this policy farther by reconstituting the legislative councils and conferring upon them wider powers of discussion. The executive councils of Madras and Bombay were enlarged by the addition of an Indian member.

As regards foreign policy, Lord Minto's Viceroyalty was distinguished by the conclusion (1907) between Great Britain and Russia of an agreement on questions likely to disturb the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular. Two expeditions had to be undertaken on the North-West frontier, against the Zakka Khels and the Mohmands;

and ships of the East Indies Squadron were frequently engaged off Maskat and in the Persian Gulf in operations designed to check the traffic in arms through Persia and Mekran to the frontier of India.

Visit of the King and Queen.

Sir Charles (Lord) Hardinge was appointed to succeed Lord Minto in 1910. His first year in India was marked by the visit to India of the King Emperor and the Queen, who arrived at Bombay on December 2, 1911. From there they proceeded to Delhi where, in the most magnificent durbar ever held in India, the coronation was proclaimed and various boons, including an annual grant of 50 lakhs for popular education, were announced. At the same ceremony His Majesty announced the transfer of the capital of India from Calcutta to Delhi; the reunion of the two Bengals under a Governor-in-Council; the formation of a new Lieutenant Governorship for Behar, Chota Nagpur and Orissa and the restoration of Assam to the charge of a Chief Commissioner.

In August, 1913, the demolition of a lavatory attached to a mosque in Cawnpore was made the occasion of an agitation among Indian Mahomedans and a riot in Cawnpore led to heavy loss of life. Of those present at the riot, 106 were put on trial but subsequently released by the Viceroy before the case reached the Sessions, and His Excellency was able to settle the mosque difficulty by a compromise that was acceptable to the local and other Mahomedans

Still more serious trouble occurred in September, 1914, when a riot at Budge-Budge among a number of Sikh emigrants returned from Canada gave a foretaste of the revolutionary plans entertained by those men. The sequel, revealed in two conspiracy trials at Lahore, showed that the "Ghadr" conspiracy was widespread and had been consistently encouraged by Germany. That plot, however, had little influence on the general attitude of India to the war with Germany, and it was not the least of Lord Hardinge's services that he encouraged India to play a magnificent part in the war. To anticipate events in some degree, it may here be stated that India was at no time included in the theatre of war except when the Emden bombarded Madras, though shipping off Bombay was seriously affected by mines laid by the enemy.

Lord Chelmsford as Viceroy.

Lord Hardinge, whose great services had been rewarded with the Knighthood of the Garter, left India in 1916 and was succeeded by Lord Chelmsford, whose tenure of office was destined to be one of the most eventful in the modern history of India. The part played by India in the war was developed in every possible way. Not only was the Indian Army increased but the resources of the country were developed with the help of the Munitions Board and India assumed responsibility for 100 millions of the war debt. The share of India in the Imperial burden of the war was emphasised in another and very significant way by her representation in the Imperial War Cabinet in London by His Highness the Maharaja of Bikaner and Sir S. P. (Lord) Sinha. On the Frontier, where there had been numerous though comparatively slight disturbances in 1914-15, a punitive expedition had to be undertaken against the Mahsuds.

In 1917 **Mr. Montagu,** who had succeeded Mr. Chamberlain as Secretary of State, carried out the latter's intention of visiting India. The visit took place at a time when the movement in favour of Home Rule for India had attained to the highest pitch yet witnessed and at a time when, as was shown by the increase of Indian representation on the Council of India and by the grant of commissions in the Army to Indians, the Government was anxious to meet the wishes of the people so far as it could without departing from its policy of avoiding controversial political issues during the war. The result of the visit was shown in the following year when a report was issued containing what is known as the joint scheme of reform evolved by the Secretary of State and the Viceroy. This scheme (of which details are given elsewhere in this volume) aimed at carrying into effect the announcement made in Parliament on August 20, 1917, that "the policy of His Majesty's Government, with which the Government of India are in complete accord, is that of the increasing association of Indians in every branch of the administration and the gradual development of self-governing institutions with a view to the progressive realisation of responsible government in India as an integral part of the British Empire." Shortly after this report there was issued a report by the Special Committee of Inquiry, over which Mr. Justice Rowlatt presided, into seditious crime in India. That report and the legislation which followed in consequence of it, together with the announcement of the proposed reform scheme, led to a renewal of political discussion and agitation which had to a great extent been in abeyance during the early years of the war.

Early in 1919 prolonged strikes in Bombay and elsewhere showed that India, though comparatively little affected by the economic results of the war, was confronted by industrial and economic problems which were none the less grave The gravity of those problems was increased by the ravages of influenza which is supposed to have caused 6,000,000 deaths during the winter months of 1917-18. Disturbances broke out in April as a sequel to the passive resistance movement against the Rowlatt Act (the Satyagraha Movement) which produced a situation to which there has been no parallel since the Mutiny. It is sufficient here to state that in Ahmedabad, Viramgam, Delhi, Lahore, Amritsar, Gujranwalla and other places the crowd, by attacking life and property and by train wrecking and tearing up railway lines and telegraph wires, provoked a situation which could only be met by the proclamation of martial law and the enforcement of military measures for the protection of law abiding subjects and for the suppression of disorder.

Exaggerated reports of those riots and of the effect of the Rowlatt Act may be presumed to have had some influence on the Amir of Afghanistan when he declared war and invaded British territory. Amir Habibullah Khan, who had been loyal to his treaty obligations throughout the war, was murdered in February and, after a brief occupation of the throne by his brother Nasrulla Khan, his son Amanulla had

been declared Amir. A sequel to this war was the renewal of trouble along a great part of the North Western frontier where the tribesmen, who had at first appeared to be impressed by the British successes, took the offensive against our advance posts especially in southern Waziristan. The operations which necessarily followed and the severity of the fighting were on a scale never previously reached in frontier war, and made the campaign of unusual length.

During the year political feeling ran high and opportunity was taken to foster a bond of union between Hindus and Mahomedans in connection with an agitation by the latter in favour of safeguarding the Khilafat and maintaining the temporal power of Turkey in its integrity. The publication of numerous despatches dealing with the Reform Scheme and the hearing of evidence by a Parliamentary Committee dealing with the subject helped to concentrate attention on the progress of the Scheme. India was represented at the Peace Conference by the Maharaja of Bikaner and by Lord Sinha, the first Indian peer and the first Indian Under Secretary.

The King's Proclamation.

The Government of India Bill was passed in December and on the 24th of that month there was issued a proclamation by His Majesty the King-Emperor (of which the full text is given elsewhere in this book) in which he invited his subjects in India to consider the past and join him in his hopes for the future. In the course of the proclamation His Majesty said :—"I rely on the leaders of the people, the Ministers of the future, to face responsibility and endure misrepresentation, to sacrifice much for the common interest of the State, remembering that true patriotism transcends party and communal boundaries ; and, while retaining the confidence of the Legislatures, to co-operate with My Officers for the common good in sinking unessential differences and in maintaining the essential standards of a just and generous Government. Equally do I rely upon My Officers to respect their new colleagues and to work with them in harmony and kindliness ; to assist the people and their representatives in an orderly advance towards free institutions ; and to find in these new tasks a fresh opportunity to fulfil as in the past their highest purpose of faithful service to My people."

Events in 1920 and 1921.

The year 1920, more than any which preceded it, was distinguished by political agitation. The cause of this was in part the indignation created by the facts disclosed in the report of the Hunter Commission on the outbreaks of 1919 in the Punjab and elsewhere, and the stimulus given to the Khilafat agitation by the terms of the Peace treaty with Turkey. In spite of the vigour with which the doctrine of non-co-operation was preached the first elections for the new Councils were held without any serious disturbance at the end of the year High prices continued, and in some cases advanced, and the world-wide labour unrest was reflected in India by many strikes.

The fruits of agitation were reaped in plenty in 1921. Murderous outbreaks at Malegaon, Dharwar and elsewhere were followed by a rebellion of the Moplahs in Malabar which assumed the most serious proportions and necessitated prolonged military operations before even a small part of the country affected could be brought back to anything like normal condition. That rebellion was due in part to economic causes but still more to the teachings of the Khilafat party which in other parts of the country also were of a character which made it necessary for Government to take action against some of the more prominent leaders of the Party. The policy of the Government, under Lord Reading who had succeeded Lord Chelmsford as Viceroy, was one of marked tolerance and patience, trusting that the non-co-operation movement would die of its own inanity In November, after Mr. Gandhi had several times promised to obtain swaraj for India by a certain date and had as often explained away his unfulfilled promise, the National Congress Committee, meeting in defiance of its President, determined that a policy of civil resistance should be adopted. In these circumstances but little attention was paid by the more extreme section of Indian politicians to the important fact that India was represented at the meeting of the Imperial Cabinet in London and at the Washington Conference on disarmament and the problems of the Pacific ; but the emphasis thus given to India's international status constitutes an important milestone in the history of India.

It had been arranged that H. R. H. the Prince of Wales should visit India at the end of 1920 and should open the new Councils in 1921, but, for reasons of health, that visit had to be postponed ; and H. R. H. the Duke of Connaught came to India early in 1921 in order to open the new Councils.

The Prince's visit actually took place later in the year. He landed at Bombay on November 17th and from there started on a prolonged tour through India. His visit was essentially non-political. He brought with him a message from the King in which His Majesty said :—"My son has followed from afar your fortunes. It is now his ambition by his coming among you, to ripen goodwill into a yet fuller understanding. I trust and believe when he leaves your shores, your hearts will follow him and his will stay with you and that one link the more will be added to the golden chains of sympathy which for these years has held my Throne to India. And it is my warmest prayer that wisdom and contentment growing in hand-in-hand will lead India into increasing national greatness within a free Empire, the Empire for which I labour and for which, if it be Divine Will, my son shall labour after me."

The enthusiasm with which the Prince was greeted at the outset of his tour was very marked. But simultaneously with the loyal display riots broke out in Bombay which speedily developed into faction fights between various communities in which the casualties were heavy, many lives being lost. Order in some parts of the city was only restored after three or four days of lawlessness.

The Government of India.

The impulse which drove the British to India was not conquest but trade. The Government of India represents the slow evolution from conditions established to meet trading requirements. On September 24, 1599, a few years before the deaths of Queen Elizabeth and Akbar, the merchants of London formed an association for the purpose of establishing direct trade with the East and were granted a charter of incorporation. The Government of this Company in England was vested in a Governor with a General Court of Proprietors and a Court of Directors. The factories and affairs of the Company on the East and West Coast of India, and in Bengal, were administered at each of the principal settlements of Madras (Fort St. George), Bombay and Calcutta (Fort William), by a President or Governor and a Council consisting of the senior servants of the Company. The three "Presidencies" were independent of each other and subordinate only to the Directors in England.

Territorial Responsibility Assumed.

The collapse of government in India consequent on the decay of Moghul power and the intrigues of the French on the East Coast forced the officers of the Company to assume territorial responsibility in spite of their own desires and the insistent orders of the Directors. Step by step the Company became first the dominant, then the paramount power in India. In these changed circumstances the system of government by mutually independent and unwieldly councils of the merchants at the Presidency towns gave rise to grave abuses. Parliament intervened, and under the Regulating Act of 1773, a Governor-General and four councillors were appointed to administer the Presidency of Fort William (Bengal), and the supremacy of that Presidency over Madras and Bombay was for the first time established. The subordinate Presidencies were forbidden to wage war or make treaties without the previous consent of the Governor-General of Bengal in Council, except in cases of imminent necessity. Pitt's Act of 1784, which established the Board of Control in England, vested the administration of each of the three Presidencies in a Governor and three councillors, including the Commander-in-Chief of the Presidency Army. The control of the Governor-General-in-Council was somewhat extended, as it was again by the Charter Act of 1793. Under the Charter Act of 1833 the Company was compelled to close its commercial business, and it became a political and administrative body holding its territories in trust for the Crown. The same Act vested the direction of the entire civil and military administration and sole power of legislation in the Governor-General-in-Council, and defined more clearly the nature and extent of the control to be extended over the subordinate governments. After the Mutiny, there was passed, in 1858, an Act transferring the Government of India from the Company to the Crown. This Act made no important change in the administration in India, but the Governor-General, as representing the Crown, became known as the Viceroy. The Governor-General is the sole representative of the Crown in India; he is assisted by a Council, composed of high officials; each of whom is responsible for a special department of the administration.

Functions of Government.

The functions of the Government in India are perhaps the most extensive of any great administration in the world. It claims a share in the produce of the land and in the Punjab and Bombay it has restricted the alienation of land from agriculturists to non-agriculturists. It undertakes the management of landed estates where the proprietor is disqualified. In times of famine it undertakes relief work and other remedial measures on a great scale. It manages a vast forest property and is the principal manufacturer of salt and opium. It owns the bulk of the railways of the country, and directly manages a considerable portion of them; it has constructed and maintains most of the important irrigation works; it owns and manages the post and telegraph systems; it has the monopoly of the Note issue, and it alone can set the mints in motion. It lends money to municipalities, rural boards, and agriculturists and occasionally to owners of historic estates. It controls the sale of liquor and intoxicating drugs and has direct responsibilities in respect to police, education; medical and sanitary operations and ordinary public works of the most intimate character. The Government has also close relations with the Native States which collectively cover more than one-third of the whole area of India and comprise more than one-fifth of its population. The distribution of these great functions between the Government of India and the provincial administrations has fluctuated and was definitely regulated by the Reform Act of 1919.

THE REFORMS OF 1919.

Great changes were made in the system of government in British India by the Government of India Act, 1919, which, together with the rules framed under it—almost as important in their provisions as the Act itself—came into general operation in January 1921. The Act was the outcome of an inquiry conducted in India in the winter of 1917-18 by the Secretary of State (Mr. Montagu) and the Viceroy (Lord Chelmsford), the results of which were embodied in their Report on Indian Constitutional Reform issued in the spring of 1918. The recommendations in this report were supplemented by those of two Committees which toured India in the winter of 1918-19, and which issued their Reports in the spring of 1919. A third Committee was appointed during the latter year to make recommendations for the modification of the system of administration of Indian affairs in the United Kingdom, and issued their Report while the Government of India Bill was under examination by a Joint Select Committee of both Houses of Parliament. The Joint Select Committee in their turn issued an exhaustive Report on the Bill, which was passed in a form practically identi-

cal with that recommended by the Joint Committee, and received the Royal Assent on the 23rd December 1919.

The Divisions.—British India for administrative purposes is divided into 15 provinces, each with its separate Local Government or administration. In eight of the provinces—the three Presidencies of Madras, Bombay and Bengal, the United Provinces of Agra and Oudh, the Punjab, Bihar and Orissa, the Central Provinces, and Assam—the Local Government consists of a Governor, an executive Council of not more than four members, and two or more Ministers. In one province—Burma—the Local Government consists, pending further legislation, of a single individual—the Lieutenant-Governor, assisted by a secretariat and headquarter staff, but Burma is to be brought into line with the other Provinces. The remaining six provinces are directly administered by Chief Commissioners, who are technically mere agents of the Central Government of India. No change has been made by the Act of 1919 in the system of administration in these six minor provinces, and although Burma has been given separate provincial revenues along with the eight major provinces, and representation on the newly constituted Indian Legislature, the Act of 1919 did not profess to make any change in the internal constitution of this province.

Dyarchy.—In these eight provinces the executive Government is a dual organism which owes its unity to the Governor. One half of the organism consists of the Governor and his executive Council, all of whom are appointed by the King. This body is responsible for the administration of those subjects which are "reserved." The other half of the executive organism is the Governor acting with the advice of Ministers who are appointed by him, hold office during his pleasure, and must be elected members of the Provincial Legislative Council. To the Governor acting with Ministers is entrusted the administration of "transferred" subjects.

The Object.—The framers of the Act of 1919 had a twofold object in view. Their primary object was to devise a plan which would render possible the introduction by successive stages of a system of responsible government in British India in modification of the previous system under which the Governments in India, both central and provincial, received their mandates from the British Parliament acting through the Secretary of State for India, the Cabinet Minister responsible to Parliament for the administration of Indian affairs. Earlier statutes thus enshrined a purely official hierarchy, consisting of the Secretary of State in Council at the apex, the Governor-General in Council (commonly known as "the Government of India") in supreme control in India, and the various Local Governments in their own provincial areas. The law enjoined upon the Local Governments implicit obedience to any instructions they might receive from the Government of India, vested in the Secretary of State in Council unlimited power to "superintend, direct and control all acts, operations and concerns which relate to the government and revenues of India," and similarly vested superintendence, direction and control over all government affairs civil and military, in India in the Government of India, subject to any instructions or directions it might receive from the Secretary of State in Council. The whole fabric was thus inextricably interwoven. The various Local Governments were primarily responsible for the preservation of law and order, and for the administration of domestic affairs in their own areas, and the Government of India was primarily responsible for the administration of those matters which affected the whole of India, and for the maintenance of good relations between province and province, though it was also responsible for the general oversight and direction of administration throughout British India. Tradition and practice, based chiefly on convenience, had therefore, to a considerable extent operated to demarcate "spheres of influence" for the Local Governments and for the Government of India respectively. But the demarcation was not clear cut, and was in no sense legally recognised. Constitutional theory, as founded upon the law in force up to the Act of 1919, made the Secretary of State responsible to Parliament for every phase of governmental activity in India and for the raising and expenditure of every rupee of Indian revenues; and, although the extent to which the exercise of this responsibility in the detailed superintendence of the formulation of policy and of the day-to-day administration in the provinces and at the centre varied from time to time with the varying personality of individual Secretaries of State and the varying interest displayed by Members of Parliament in Indian affairs, the fact that responsibility did lie to Parliament for every detail of Indian administration rendered inevitable a close and detailed supervision from Whitehall. This in its turn necessitated a similar relationship between the Government of India and the provinces. With the increasing complexity of Government activities, it was inevitable that the Local Governments, at all events of the major provinces, should gradually acquire considerable freedom in the management of their domestic affairs; but the Government of India, in virtue of its statutory right of control and intervention and its concurrent powers of legislation for the provinces, was always able, and frequently bound, to exercise powers, both executive and legislative, which at times tended to excessive centralisation and to the subordination of the best interests of one part of British India to what was conceived to be the uniform advantage of the provinces as a whole.

The Provinces.—Starting from the premise that it was in the provinces that the first substantial steps must be taken towards the development of a system of responsible government, the framers of the Act of 1919 provided for a statutory demarcation of the functions to be exercised by the Government of India and the Provincial Governments respectively, in their administrative capacity. No attempt was made in this connection to limit the field open to the Indian Legislature, which still retains a concurrent (though not an overriding) power of legislation for the affairs of the

provinces in general of individual provinces; but the rules under the Act provide specifically for the exercise of this right in certain specified provincial matters, and the theory upon which the Act proceeds assumes that a convention will be established and rigorously observed which will confine intervention by the Indian Legislature in provincial affairs to matters so specified.

Finance.—The "revenues of India"—or, rather, their sources—are definitely divided between the Central and Provincial Governments; the Provincial Governments have now almost complete control over the administration of their "allocated" revenues, they have power to supplement them by raising loans on the security of these revenues, and their right, subject in certain cases to the Governor-General's sanction, to initiate new taxation measures is formally recognised.

It was found impossible to devise any scheme of allocation of revenues between the Central and Provincial Governments which did not leave the former with a deficit. This deficit is to be met in part by an annual contribution from seven of the eight Governors' provinces, the province of Bihar and Orissa, owing to the comparative exiguousness and inelasticity of its own revenues, having been exempted from this contribution. The aggregate sum thus due from the provinces to the Government of India at the outset is Rs. 983 lakhs, of which Madras contributes Rs. 348 lakhs, the United Provinces Rs. 240 lakhs, the Punjab Rs. 175 lakhs, and the other four provinces sums ranging from Rs. 15 lakhs to Rs. 64 lakhs. The annual contribution is in no case to be subject to increase in the future, and if reduction of the aggregate is found possible by the Government of India, reductions are to be made in fixed proportions from the quota of the several provinces.

Responsibility.—The first steps towards responsibility were to transform the Provincial Legislative Council into a body of sufficient size and with a sufficiently large elected majority (which the Act fixes at 70 per cent. as a minimum) to represent adequately public opinion in the province, and to create an electorate. The first franchise rules have given the vote to about 5,000,000 of the adult male population, and have enabled the Legislative Council of any "Governor's province" to extend the franchise to women. The following table shows the strength and composition of each of the Provincial Councils:—

Province.	Elected.	Nominated and *ex-officio*.		Total.
		Officials.	Non-officials.	
Madras	98	23	6	127
Bombay	86	20	5	111
Bengal	113	20	6	139
United Provinces	100	18	5	123
Punjab	71	16	6	93
Bihar and Orissa	76	18	9	103
Central Provinces	53	10	5	68
Assam	39	9	5	53

The figures for officials in this table are maxima in every case, and where less than the maximum number of officials is nominated to any Council, the number of nominated non-officials must be increased in proportion; *e.g.*, if there are only 16 officials (nominated and *ex-officio*) on the United Provinces Council, there must be seven nominated non-officials. The official members who have seats *ex-officio* are the members of the Executive Council, who are at present four in number (the statutory maximum) in Madras, Bombay, and Bengal, three in Bihar and Orissa, and two in each of the remaining provinces. These Executive Councils contain an equal number of Indian and British members except in Bihar and Orissa (which has an Indian Governor), where two of the three members are British officials.

Electorates.—The electorates in each province are arranged for the most part on a basis which is designed to give separate representation to the various races, communities, and

special interests into which the diverse elements of the Indian population naturally range themselves. Although there are minor variations from province to province, a table showing their character in one province (Bengal) will give a sufficiently clear idea of the general position.

Class of Electorate.	No. of Electorates of this Class.	No. of Members returnable by Electorates of this Class.
Non-Muhammadan	42	46
Muhammadan	34	39
European	3	5
Anglo-Indian (in the technical sense of persons of mixed European and Asiatic descent).	1	2
Landholders	5	5
University	1	1
Commerce and Industry	8	15
Total	94	113

Of the 94 constituencies in Bengal, all but nine (those representing the University and Commerce and Industry) are arranged on a territorial basis, *i e*, each constituency consists of a group of electors, having the prescribed qualifications which entitle them to a vote in a constituency of that class, who inhabit a particular area. The normal area for a "Muhammadan" or "non-Muhammadan" constituency is a district (or where districts are large and populous, half a district) in the case of rural consituencies, and, in the case of urban constituencies, a group of adjacent municipal towns Some large towns form urban constituencies by themselves, and the City of Calcutta provides eight sparate constituencies, six "non-Muhamadan" and two "Muhammadan" the latter, of course, being coterminous with the former.

Throughout the electoral rules there runs a general classification of the various kinds of constituencies into two broad categories, those which are designed to represent special interests, such as Landholders, Universities, Planters or Commerce being described as "special" constituencies, and those which are based on a racial distinction—Muhammadan, European, Sikh, etc.—being known as "general" constituencies.

Voters' Qualifications.—The qualifications for electors (and consequently for candidates) vary in detail from province to province, chiefly on account of variations in the laws and regulations which form the basis of assessment of income or property values. Generally speaking, both in rural and urban areas the franchise is based on a property qualification as measured by the payment of a prescribed minimum of land revenue or of its equivalent, or of income tax, or of municipal taxes, but in all provinces retired, pensioned or discharged officers and men of the regular army are entitled to the vote, irrespective of the amount of their income or property. The actual number of voters registered in each province on the first rolls prepared under the new Act are shown in the following table, but owing to the short time available for the preparation of these rolls it is not unlikely that the revision due before the next elections will result in a general increase :—

TABLE SHOWING TOTAL NUMBER OF VOTERS REGISTERED IN EACH PROVINCE ON THE ROLLS PREPARED FOR THE ELECTIONS OF 1920

Madras ..	1,258,156	Punjab ..	505,361
Bombay ..	548,419	Bihar and Orisas ..	327,564
Bengal ..	1,021,418	Central Provinces.	144,737
United Provinces	1,347,278	Asam ..	203,191
Total ..		5,356,124.	

POWERS OF PROVINCIAL LEGISLATIVE COUNCILS.

In origin the legislative authority in British India was a meeting of the Governor-General (or, in the case of the Presidencies of Madras and Bombay, of the Governor) with his Executive Council, "for the purpose of legislation." When met for this purpose there were added to the Executive Council certain "additional members," at first very few in number, and those few all nominated by the Governor-General or the Governor, as the case might be. A Council so constituted had originally no powers or duties beyond those immediately arising out of the discussion of the particular legislative measure which at the time was engaging its attention, and its functions were confined strictly to the discussion and enactment of legislative measures. In course of time the number of "additional" members, and the proportion of these who were non-official Indians, were steadily increased, the principle of election was gradually substituted for nomination as the means of selecting non-official members, and the functions of the Councils were extended so as to include the right of interpellation, of the discussion of matters of general public interest, and of criticising and discussing the budget proposals of the Executive Government. This extension of the powers of the Councils was in the main the result of the "Morley-Minto Act" of 1909. The Indian Councils

Act of 1892 had given power to discuss the budget but not to divide the Council upon it Lord Morley's Act went further and provided that, notwithstanding the terms of the Indian Councils Act of 1861 which had restricted the powers of all Councils to the discussion of legislative measures, the Local Government might make rules authorising the discussion of the annual financial statement, of any matter of general public interest, and the asking of questions under such conditions and restrictions as might be imposed by the rules, and these rules recognised the right of the Councils to vote on motions thus submitted for their discussion The other results of the Act of 1909 were definitely to recognise the principle of election as the means of selecting non-official members of all Councils (although the method adopted was mainly that of indirect election), a considerable increase in the number of both non-official and official members, and the setting up in every province of a non-official (though not, save in one province, an elected) majority. A further important, though indirect, result of the Morley-Minto Act was the appointment of an Indian member to the Executive Council of the Governor-General, and to such Provincial Executive Councils as were then in existence and subsequently created.

Old System.—But although the Legislative Councils (which, originally created in two provinces only in addition to the Governor-General's Legislative Council, existed in 1919 in nine provinces) had steadily acquired a more and more representative character and a large share of the normal functions of a legislative assembly as generally understood, they still remained in theory up to the passing of the Act of 1919 mere accretions to the Executive Government of the provinces for the purpose of advising on, and enacting, legislation. It is true that the non-official element in the Provincial Council's as constituted by Lord Morley's Act of 1909 had acquired a considerable measure of control over legislation, in view of the fact that in most provinces that Act and the rules framed under it placed the non-official members in a slight majority over their official colleagues; but for various reasons this control, even in the sphere of legislation, can hardly be described as definite popular control, and over matters outside the legislative sphere the Councils had no controlling voice at all.

The Changes.—The most important changes made by the Act of 1919 in the powers of the Provincial Councils were—

(*i*) the power to vote (and consequently to withhold) supplies;

(*ii*) a greatly enhanced freedom of initiation in the matter of legislation; and

(*iii*) power to frame their own rules of procedure in matters of detail, subject to the Governor's concurrence.

A further right which the Councils will acquire after four years from the time of their commencement is the right to elect their own President. At the outset the President is nominated by the Governor, but from the start every Council has an elected Deputy President. The Governor (who formerly was *ex-officio* President of his Legislative Council) no longer has any direct connection with its proceedings. The first-named of these newly acquired powers is of sufficient importance to require a detailed explanation of its scope, which can best be given in the terms of the Act itself (section 72D).

72D.—(1) The provisions contained in this section shall have effect with respect to business and procedure in governors' legislative councils.

(2) The estimated annual expenditure and revenue of the province shall be laid in the form of a statement before the council in each year, and the proposals of the local government for the appropriation of provincial revenues and other moneys in any year shall be submitted to the vote of the council in the form of demands for grants. The council may assent, or refuse its assent, to a demand, or may reduce the amount therein referred to either by a reduction of the whole grant or by the omission or reduction of any of the items of expenditure of which the grant is composed:—

Provided that—

(*a*) the local government shall have power, in relation to any such demand, to act as if it had been assented to, notwithstanding the withholding of such assent or the reduction of the amount therein referred to, if the demand relates to a reserved subject, and the governor certifies that the expenditure provided for by the demand is essential to the discharge of his responsibility for the subject; and

(*b*) the governor shall have power in cases of emergency to authorise such expenditure as may be in his opinion necessary for the safety or tranquility of the province, or for the carrying on of any department; and

(*c*) no proposal for the appropriation of any such revenues or other moneys for any purpose shall be made except on the recommendation of the governor, communicated to the council.

(3) Nothing in the foregoing sub-section shall require proposals to be submitted to the council relating to the following heads of expenditure:—

(*i*) Contributions payable by the local government to the Governor-General in Council; and

(*ii*) Interest and sinking fund charges on loans; and

(*iii*) Expenditure of which the amount is prescribed by or under any law; and

(*iv*) Salaries and pensions of persons appointed by or with the approval of His Majesty or by the Secretary of State in Council; and

(*v*) Salaries of judges of the high court of the province and of the advocate-general.

If any question arises whether any proposed appropriation of moneys does or does not relate to the above heads of expenditure, the decision of the governor shall be final.

Executive and Legislature:—In the light of these facts it is now possible to explain more exactly the relationship between the provincial executive and the provincial legislature. The dual character of the former has already been mentioned, and the corresponding bifurcation of provincial subjects into "reserved" and "transferred" categories. The rules under the act prescribe a list of 20 subjects which are trans-

ferred to the administration of the Governor acting with Ministers, the more important of which are Local Self-Government, Medical Administration, Public Health, Education (with certain reservations), Public Works, Agriculture, Excise, and Development of Industries The "reserved" subjects comprise all those in the list of "provincial" (as distinct from "central") subjects which are not transferred.

Machinery:—No change has been made by the Act of 1919 in the machinery and methods of administration by the Governor in Council; decisions are taken at the Council Board, as before, by a majority vote, and the Governor is entitled, as before, to overrule such a vote in certain specified circumstances if he disagrees with it. For such decisions the Governor in Council remains, as before, responsible to the Secretary of State and Parliament, and on questions of legislation and supply he has the power of enforcing them despite opposition by a majority of the Legislative Council. But, the whole spirit of the Act and the existence of a large non-official elected majority in every Provincial Legislative Council is an important factor in determining the policy to be pursued by the official half of the Government in its administration of reserved subjects. A further and not less important factor is the existence in the Government, side by side with the Executive Council, of two or more Ministers appointed from the elected members of the legislature, who, though they are not charged by law with, and in fact are legally absolved from, any responsibility for decisions on matters outside the transferred sphere, will necessarily be able, and in fact are expected, to make their opinions felt by their colleagues in the Executive Council. But these factors, while they will doubtless lead to constant endeavour on the part of the official half of the Government to accommodate its policy to the wishes of its ministerial colleagues and of the majority of the legislature, and to avoid situations which involve resort to the enforcement of its decisions in the face of popular opposition, are not intended to obscure the responsibility to Parliament in the last resort of the Governor in Council for the administration of reserved subjects and the right of His Majesty's Government, and of the Secretary of State as a member thereof, to lay down and require the observance of any principles which they regard as having the support of Parliament, and, in the last resort, of the British electorate.

Transfer of Control.—With regard to transferred subjects the position is very different. Here there has been an actual transfer of control from the British elector and the British Parliament to the elector and the Legislative Council in the Indian province. The provincial subjects of administration are grouped into portfolios, and just as each member of the Executive Council has charge of a portfolio consisting of a specified list of "reserved" subjects or "departments," so each Minister is directly responsible for the administration of those particular transferred "departments" which are included in his portfolio. But his responsibility lies, not, as in the case of a member of the Executive Council, to the Government of India, the Secretary of State and Parliament, but to the Provincial Legislative Council of which he is an elected member and from which he is selected by the Governor as commanding or likely to command the support of the majority of that body. He holds office during the Governor's pleasure, but his retention of office is contingent on his ability to retain the confidence not only of the Governor, but also of the Legislative Council, upon whose vote he is directly dependent for his salary. Further, the control of the Legislative Council over transferred subjects, both as regards supplies and legislation, is almost entirely free from the restrictions just noticed which necessarily qualify its control over the "reserved" subjects. It is thus within the power of the Provincial Council to insist on the pursuit of a policy of its own choice in the administration of transferred subjects by withdrawing its confidence from a Minister who departs from that policy and bestowing it only on a successor who will follow its mandate; and this power is dependent on the provincial elector in virtue of his freedom to control the composition of the Legislative Council by the use which he makes of his vote No doubt this statement requires some qualification before it can be accepted as literally accurate, for, technically, the authority charged with the administration of transferred subjects is "*the Governor acting with Ministers* appointed under this Act," not the Ministers acting on their own initiative, and, further, the Governor, who is not, of course, subject to removal from office by the Legislative Council, is charged personally with responsibility for the peace and tranquillity of his province, and would be entitled, and indeed bound, to recommend the removal of a department from the transferred list if he found the legislature bent on pursuing a policy in its administration which, in his judgment, was incompatible with the maintenance of peace and tranquillity; yet the powers of control vested in the Legislative Council over the transferred sphere are undoubtedly great, and it was the opinion at all events of the Joint Select Committee that legislature and Ministers should be allowed to exercise them with the greatest possible freedom. "If after hearing all the arguments," observed the Committee, "Ministers should "decide not to adopt his advice, then in the "opinion of the Committee the Governor should "ordinarily allow Ministers to have their way, "fixing the responsibility upon them, even if "it may subsequently be necessary for him to "veto any particular piece of legislation. It "is not possible but that in India, as in all other "countries, mistakes will be made by Ministers "acting with the approval of a majority of the "Legislative Council, but there is no way of "learning except through experience and "the realisation of responsibility."

Provision of Funds.—The terms of the Act leave the apportionment of the provincial revenues between the two halves of the executive for the financing of reserved and transferred subjects respectively to be settled by rules, merely providing that rules may be made "for "the allocation of revenues or moneys for the purpose of such "administration" *i.e.*, "the "administration of transferred subjects by the "Governor acting with Ministers." Probably the best description available of the method adopted by the rules for the settlement of this matter is the recommendation of the Joint

Select Committee whose proposals have been followed with one modification only to enable the Governor to revoke at any time, at the desire of his Council and Ministers an "order of allocation" or to modify it in accordance with the'r joint wishes. The passage is as follows :—

"The Committee have given much attention to the difficult question of the principle on which the provincial revenues and balances should be distributed between the two sides of the provincial governments They are confident that the problem can readily be solved by the simple process of common sense and reasonable give-and-take, but they are aware that this question might, in certain circumstances, become the cause of much friction in the provincial government, and they are of opinion that the rules governing the allocation of these revenues and balances should be framed so as to make the existence of such friction impossible They advise that, if the Governor, in the course of preparing either his first or any subsequent budget, finds that there is likely to be a serious or protracted difference of opinion between the Executive Council and his Ministers on this subject he should be empowered at once to make an allocation of revenue and balances between the reserved and transferred subjects which should continue for at least the whole life of the existing Legislative Council The Committee do not endorse the suggestion that certain sources of revenue should be allocated to reserved and certain sources to transferred subjects, but they recommend that the Governor should allocate a definite proportion of the revenue, say, by way of illustration, two-thirds to reserved and one-third to transferred subjects, and similarly a proportion, though not necessarily the same fraction of the balances It the Governor desires assistance in making the allocation, he should be allowed at his discretion to refer the question to be decided to such authority as the Governor-General shall appoint. Further, the Committee are of opinion that it should be laid down from the first that, until an agreement which both sides of the Government will equally support has been reached, or until an allocation has been made by the Governor, the total provisions of the different expenditure heads in the budget of the province for the preceding financial year shall hold good.

The Committee desire that the relation of the two sides of the Government in this matter as in all others, should be of such mutual sympathy that each will be able to assist and influence for the common good the work of the other, but not to exercise control over it. The budget should not be capable of being used as a means for enabling Ministers or a majority of the Legislative Council to direct the policy of reserved subjects; but on the other hand the Executive Council should be helpful to Ministers in their desire to develop the departments entrusted to their care. On the Governor personally will devolve the task of holding the balance between the legitimate needs of both sets of his advisers."

THE CENTRAL GOVERNMENT

The structural changes made by the Act of 1919 in the system of government outside the eight "Governors' provinces" are of comparatively minor scope, though the spirit of the Act requires, as has already been shown, considerable modification of the relationship hitherto subsisting between the Provincial Governments on the one hand and the Government of India and the Secretary of State in Council on the other. The only concrete changes made in the constitution of the Central Government are the removal of the statutory bar to the appointment of more than six members of the Governor-General's Executive Council (which, however, has had the far-reaching consequence that three of the eight members of the Council are now Indians), and the reconstitution in a much more enlarged, representative and independent form of the central legislature It has already been observed that this body was, in origin, like all other legislative bodies in India, the Governor-General's Executive Council with the addition of certain "additional members" appointed to assist the Executive Council in the formulation of legislation. Despite its steady growth in size and influence, and despite the introduction of the elective system, the existence of "additional members," who of course under Lord Morley's Act greatly preponderated in numbers over the members proper, *i.e.*, the Executive Councilors, still persisted up to the passing of the Act of 1919. That Act, however, has entirely remodelled the "Indian Legislature," as it is now called, which has become, like the Legislative Council in a Governor's province a legislature with all the inherent powers ordinarily attributed to such a body save such as are specifically withheld by the terms of the Act It consists of two Chambers The Upper Chamber, or "Council of State," contains 60 members, of whom 34 are elected (including one member to represent Berar, who, though technically nominated, is nominated as the result of elections held in Berar), and 26 nominated, of whom not more than 20 may be officials The Lower Chamber, or "Legislative Assembly," consists of 144 members, of whom 104 are elected (including as in the case of the Council of State, one Berar member, who, though actually elected, is technically a nominee). Of the 40 nominated members, 26 are required to be officials. The members of the Governor-General's Executive Council are not *ex-officio* members of either Chamber, but each of them has to be appointed a member of one or other Chamber, and can vote only in the Chamber of which he is a member. Any member of the Executive Council, may, however, speak in either Chamber. The President of the Upper Chamber is a nominee of the Governor-General, as also, for the first four years after the constitution of the Chamber, is the President of the Legislative Assembly. But after that period the Lower Chamber is to elect its own President, and it elects its own Deputy-President from the outset. The normal lifetime of each Council of State is five years, and of each Legislative Assembly three years; but either Chamber, or both simul-

taneously, may be dissolved at any time by the Governor-General.

Election.—The method of election for both Chambers is direct, and although the number of electors is considerably smaller than for the Provincial Councils, it is a great advance on the very restricted and for the most part indirect franchise established under the Act of 1909 for the unicameral central legislature which no longer exists. Generally speaking, the electoral scheme for the Lower Chamber is on the same model as that for the Provincial Councils already described, except that, *firstly*, the property qualification for voters (and consequently for candidates) is higher in order to obtain manageable constituencies, and past service with the colours is not *per se* a qualification for the franchise, and *secondly*, that the constituencies necessarily cover a considerably larger area than constituencies for the Provincial Council. The distribution of seats in both Chambers, and the arrangement of constituencies, are on a provincial basis; that is a fixed number of the elective seats in each Chamber is assigned to representatives of each province, and these representatives are elected by constituencies covering an assigned area of the province.

The following table shows the allotment of the elective seats:—

	Legislative Assembly	Council of State.
Madras ..	16	5
Bombay ..	16	6
Bengal	17	6
United Provinces ..	16	5
Punjab ..	12	4
Bihar and Orissa ..	12	3
Central Provinces ..	6	2
Assam	4	1
Burma ..	4	2
Delhi	1	..
	104	34

Since the area which returns perhaps 80 members to a Provincial Council is the same as the area which returns perhaps 12 members to the Legislative Assembly—namely, the entire province in each case—it follows that on the direct election system this area must be split into constituencies which are much larger than the constituencies for the local Councils, and just as it is generally correct to say that the normal area unit for those rural constituencies for the latter which are arranged on a territorial basis is the district, it may be said that the normal area unit in the case of the Legislative Assembly is the Division (the technical term for the administrative group of districts controlled by a Divisional Commissioner).

The Franchise:—The general result of the first franchise arrangements under the Act is thus that there is in each province a body of electors qualified to vote for, and stand for election to, the Provincial Council, and that a selected number of these voters are qualified to vote for and stand for election to those seats in the Legislative Assembly which are assigned to the province. The qualifications for candidature for the Legislative Assembly are the same in each province, *mutatis mutandis*, as for candidature for the Provincial Council, except that in all provinces, so long as the candidate can show that he resides somewhere within the province, no closer connection with his particular constituency is insisted upon.

The franchise for the Council of State differs in character from that for the Provincial Council and the Legislative Assembly. The concern of the framers of the Act and rules was to secure for the membership of this body a character as closely as possible approximating to a "Senate of Elder Statesmen" and thus to constitute a body capable of performing the function of a "true revising Chamber." With this object, in addition and as an alternative to a high property qualification—adopted as a rough and ready method of enfranchising only persons with a stake in the country—the rules admit as qualifications certain personal attributes which are likely to connote the possession of some past administrative experience or a high standard of intellectual attainment. Examples of these qualifications are past membership of either Chamber of the Legislature as now constituted, or of its predecessor, or of the Provincial Council the holding of high office in local bodies (district boards, municipalities and corporations), membership of the governing bodies of Universities, and the holding of titles conferred in recognition of Indian classical learning and literature.

Powers:—The powers and duties of the Indian legislature differ but little in character within the "central" sphere from those of the provincial Councils within their provincial sphere, and it has acquired the same right of voting supplies for the Central Government. But as no direct attempt has yet been made to introduce responsible government at the centre the step in that direction having been avowedly confined to the provinces, and as consequently the Executive Government of India remains legally responsible as a whole for the proper fulfilment of its charge to the Secretary of State and Parliament, it follows that the powers conferred on provincial Governors to disregard an adverse vote of the Legislative Council on legislation or supplies are, as conferred on the Governor-General in his relationship with the Indian Legislature, less restricted in their operation than in the provinces; that is to say, they cover the whole field and are not confined in their application to categories of subjects.

THE INDIA OFFICE.

The Act makes no structural changes in the part played by the India Office in the administration of Indian affairs. Slight alterations have been effected in the number and tenure of office of the members of the Secretary of State's Council, and some relaxations have been made in the statutory rigidity which formerly bound their procedure and that of the Office in general. But provisions now exist which will undoubtedly as time

goes on have a material effect on the activities of the Office as it is now constituted. A High Commissioner for India has been appointed for the purpose of taking over, as the direct agent of the Government of India, that portion of India Office functions which is of the nature of agency, as distinct from administrative supervision and control. The process of separation of staff and functions for the purpose of this transfer will necessarily be somewhat slow, but a substantial beginning has been made by handing over to the direct control of the High Commissioner the large departments which are concerned with the ordering and supply of stores and stationery in England for Government use in India, with the payment of pensions to retired members of Indian services resident in the United Kingdom, and with the assistance of Indian students in England. Concurrently with this change, it is now possible to defray from British revenues the salaries of the Secretary of State and of the Parliamentary Under Secretary, and that portion of the cost of salaries of India Office staff and general maintenance which is attributable to the exercise of its administrative as distinct from purely agency functions.

In due course the apportionment to British estimates will be the cost of the India Office as it exists after the transfer of functions to the High Commissioner has been completely effected; then the salaries of the High Commissioner and his staff will be the only expenses in the United Kingdom chargeable to Indian revenues. Until that time arrives, however, an estimate was the only basis for settlement, and for five years from 1920-21. the cost ofthe India Office payable from British revenues has been fixed at 136,500*l*., which includes the salaries of the Secretary of State and of the Parliamentary Under Secretary, and a contribution of 40,000*l*., which has for some years been made by the Treasury towards Indian expenditure, as the result of the recommendations of the Welby Commission.

THE FUTURE.

The Act of 1919 and its provisions are essentially transitional. It is intended, not to set up a new and permanent constitution, but to make such changes in the law as will enable "the progressive realisation of responsible Government in British India as an integral part of the Empire." This feature of the Act was clearly expressed in its Preamble, but although the Preamble finds no place in the law as amended by the Act of 1919, that law now contains provision for the appointment, after a period of 10 years' trial of the law in its amended form, of a Parliamentary Commission "for the purpose of inquiring into the working of the system of government, the growth of education, and the development of representative institutions in British India, and matters connected therewith," and such a Commission, when appointed, is directed to "report as to whether it is desirable to establish the principle of responsible government, or to extend, modify, or restrict the degree of responsible government then existing" in British India. Had it been possible to legislate more exactly for a process of evolution, the Act would doubtless have provided for a series of such Commissions, as the means of affording to Parliament criteria for determining "the time and manner of each advance" in "progress by successive stages" towards attainment of the "declared policy," of which the Preamble speaks. But it will be the task of a future Parliament to decide what changes, by further legislat on or by amendment of the existing statutory rules, it is expedient to adopt in the light of the first Statutory Commission's enquiry: and in taking its decisions that Parliament will, in the main, be "guided" (as its predecessor of 1919 forecasted) "by the cooperation received from those on whom new opportunities for service" have been "conferred, and by the extent to which it is found that confidence can be reposed in their sense of responsibility."

PERSONNEL AND PROCEDURE.

The Governor-General and the "Executive" members of his Council are appointed by the Crown. No limit of time is specified for their tenure of office, but custom has fixed it at five years. There are seven Executive Members of Council. These Members hold respectively the portfolios of Land Revenue and Agriculture, the Home, the Finance and the Education Departments. The Law Member has charge of the Legislative Department, and a member with English official experience has charge of the Commerce and Industry Department. The Viceroy acts as his own member in charge of Foreign affairs. Railways are administered by a Board of three members, whose chairman has the status of a Secretary, and are under the general control of the Commerce and Industry Department. The Commander-in-Chief may also be and in practice always is, an "extraordinary" member of the Council. He holds charge of the Army Department. The Governors of Madras, Bombay and Bengal become "extraordinary" members if the Council meets within their Presidencies. The Council may assemble at any place in India which the Governor-General appoints; in practice it meets only in Delhi and Simla.

In regard to his own Department each Member of Council is largely in the position of a Minister of State, and has the final voice in ordinary departmental matters But any question of special importance, and any matter in which it is proposed to over-rule the views of a Local Government, must ordinarily be referred to the Viceroy Any matter originating in one department which also affects another must be referred to the latter, and in the event of the Departments not being able to agree, the case is referred to the Viceroy. The Members of Council meet periodically as a Cabinet—ordinarily once a week—to discuss questions which the Viceroy desires to put before them, or which a member who has been over-ruled by the

Viceroy has asked to be referred to Council. If there is a difference of opinion in the Council the decision of the majority ordinarily prevails, but the Viceroy can over-rule a majority if he considers that the matter is of such grave importance as to justify such a step. Each department office is in the subordinate charge of a Secretary, whose position corresponds very much to that of a permanent Under-Secretary of State in the United Kingdom, but with these differences—that the Secretary is present at Council meetings; that he attends on the Viceroy, usually once a week, and discusses with him all matters of importance arising in his Department; that he has the right of bringing to the Viceroy's special notice any case in which he considers that the Viceroy's concurrence should be obtained to action proposed by the Departmental Member of Council; and that his tenure of office is usually limited to three years. The Secretaries have under them Deputy, Under and Assistant Secretaries, together with the ordinary clerical establishments. The Secretaries and Under-Secretaries are usually members of the Indian Civil Service. The Government of India has no Civil Service of its own as distinct from that of the Provincial Governments, and officers serving under the Government of India are borrowed from the Provinces.

THE DIVISION OF FUNCTIONS.

The keynote of the scheme is effective provincial autonomy and the establishment of an immediate measure of responsibility in the Provinces all of which are raised to the status of Governors in Council. This demanded a sharp division between Imperial and Provincial functions. The following subjects are reserved to the Government of India, with the corollary that all others vest in the Provincial Governments:—

1. (*a*) Defence of India, and all matters connected with His Majesty's Naval, Military, and Air Forces in India, or with His Majesty's Indian Marine Service or with any other force raised in India, other than military and armed police wholly maintained by local Governments.

(*b*) Naval and military works cantonments.

2. External relations, including naturalisation and aliens, and pilgrimages beyond India.

3. Relations with States in India.

4. Political charges.

5. Communications to the extent described under the following heads namely:—

(*a*) railway and extra-municipal tramways, in so far as they are not classified as provincial, subjects under entry 6 (*d*) of Part II of this Schedule;

(*b*) aircraft and all matters connected therewith; and

(*c*) inland waterways, to an extent to be declared by rule made by the Governor General in Council or by or under legislation by the Indian legislature.

6. Shipping and navigation, including shipping and navigation on inland waterways in so far as declared to be a central subject in accordance with entry 5 (*c*).

7. Light-houses (including their approaches) beacons, lightships, and buoys.

8. Port quarantine and marine hospitals.

9. Ports declared to be major ports by rule made by the Governor General in Council or by or under legislation by the Indian legislature.

10. Posts, telegraph and telephones, including wireless installations.

11. Customs, cotton excise duties, income-tax, salt, and other sources of all-India revenues.

12. Currency and coinage.

13. Public debt of India.

14. Savings Banks.

15. The Indian Audit Department and excluded Audit Departments, as defined in rules framed under section 96-D (1) of the Act.

16. Civil law, including laws regarding status, property, civil rights and liabilities, and civil procedure.

17. Commerce, including banking and insurance.

18. Trading companies and other associations.

19. Control of production supply and distribution of any articles in respect of which control by a central authority is declared by rule made by the Governor General in Council or by or under legislation by the Indian legislature to be essential in the public interest.

20. Development of industries, in cases where such development by a central authority is declared by order of the Governor General in Council, made after consultation with the local Government or local Governments concerned expedient in the public interest.

21. Control of cultivation and manufacture of opium, and sale of opium for export.

22. Stores and stationery, both imported and indigenous, required for Imperial Departments.

23. Control of petroleum and explosives.

24. Geological survey.

25 Control of mineral development, in so far as such control is reserved to the Governor General in Council under rules made or sanctioned by the Secretary of State, and regulation of mines.

26. Botanical Survey.

27. Inventions and designs.

28. Copyright

29. Emigration from, and immigration into, British India, and inter-provincal migration.

30 Criminal law, including criminal procedure.

31. Central police organisation.

32. Control of arms and ammunition.

33. Central agencies and institutions for research (including observatories), and for professional or technical training or promotion of special studies.

34. Ecclesiastical administration, including European cemeteries.

35. Survey of India.

36. Archæology.

37. Zoological Survey.

38. Meteorology.

39. Census and statistics.

40. All-India services.

41. Legislation in regard to any provincial subject in so far as such subject is in Part

II of this Schedule stated to be subject to legislation by the Indian legislature, and any powers relating to such subject reserved by legislation to the Governor General in Council.

42. Territorial changes, other than inter-provincial, and declaration of law in connection therewith.

43. Regulation of ceremonial, titles, orders, precedence, and civil uniform.

44. Immovable property acquired by, and maintained at the cost, of the Governor General in Council.

45. The Public Service Commission.

Government of India.

VICEROY AND GOVERNOR-GENERAL OF INDIA

His Excellency the Right Hon. RUFUS DANIEL ISAACS, Earl of Reading, P.C., G.C.B., G.M.S.I., G.M.I.E., K.C.V.O., *assumed charge of office, 3rd April*, 1921.

PERSONAL STAFF OF THE GOVERNOR-GENERAL.

Private Secretary, S. R. Hignell, C.I.E., I.C.S.
Comptroller of the Household, Major W. W. Muir, O.B.E.
Military Secretary, Lieut.-Col. C. Kennedy Craufurd Stuart, O.B.E.
Asst. Private Secretary, C. L. Corfield, I.C.S.
Aides-de-Camp.—Capt. A. E. C. Harris, M.C., 7th Lrs.; Capt. R. T. Lawrence, M.C., 10th Lrs., Capt. C. M. W. Noel-Hill, Rifle Bde.; Capt. R. Burton, Gren. G'ds. (Res. of Offs.); Subadar-Major Dalpat Singh, Bahadur, I.O.M., 6th Royal Jat Lt. Infy., Subadar-Major Gulab Shah, (Hony. Lt.) Bahadur, 1-127th Bal. L. I.
Extra Aide-de-Camp.—Lt. G. G. Meares, M.C., R.A.
Honorary Aides-de-Camp—Lt.-Col. (Hony Col., late Ind. Volrs.) H. H. G. Mitchell, O.B.E., late 2nd Madras Gp. Garr. Arty., Lt.-Col. G. E. Llewhellin, V.D., Bihar L. H.; Lt.-Col. (Hony. Col, late Ind Volrs.) W. T. Wright, V.D., Punj. Rif.; Lt.-Col. T. F. Gavin-Jones, late 7th U. P. Horse, Lt.-Col. P. R. Cadell, C.S.I., C.I.E., V.D., late 15th Bo. Bn.; Lt.-Col R. St. J. Hickman, V.D., Surma V. L. H.; Lt.-Col J. Donald, C.I.E., I.C.S., Cal. Bn., Capt. E. J. Headlam, C.M.G., D.S.O., R.I.M.; Lt.-Col. (Hony. Col., late Volrs.) A. J. Pugh, O.B.E., V.D., Calcutta L. Horse; Lt.-Col. S. S. G. Tulloch, V.D., B. N. Ry. R.; Lt.-Col. W. M. Egerton, I.e.C., D.S.O., Rang'n Bn.; Raja Sir Hari Singh, K.C.I.E., Hony. Capt. General in, and Commander-in-Chief of, the Jammu and Kashmir State Forces; Ganpat Rao Raghunath Rajwade, C.B.E., Colonel in Gwalior State Army; Jafar Husain, Risaldar-Major, H. E. the Govr. Genl.'s Body Guard; Nawab O man Yar-ud-Dowla, Bahadur, Major and Commander of H. E. H. the Nizam's Regular Forces; B. Chamraj Urs, Sardar Bahadur, Lt.-Col. and Chief Commandant, Mysore State Forces; Risaldar-Maj. (Hony. Capt.) Abdul Aziz, Sardar Bahadur, late 5th Cav.; Madho Singh Rana, Subadar-Major (Hony. Capt.), Sardar Bahadur late 4th G.R.; Risaldar-Major (Hony. Capt.) Abdul Karim Khan, Sardar Bahadur, late Gover.-Genl.'s Body Guard Subdr.-Maj. (Hony. Capt.) Mit Singh, I.O.M., Sardar Bahadur, late 53rd Sikhs; Risaldar-Maj. Karm Singh, Bahadur, late 13th Lrs; Risaldar-Maj. (Hony. Capt.) Muhi-ud-din Khan, C.I.E., I.D.S.M., Sardar Bahadur, late 31st Lrs.

Surgeon, Major T. J. C. Evans, M.C., F.R.C.S., I.M.S.

Commandant of Body Guard, Major A. Brooke, 18th Lrs.

Ordinary Members—

COUNCIL.

Sir William Henry Hoare Vincent, K.C.S.I.
W. M. Hailey, C.S.I., C.I.E. (*Finance*).
Khan Bahadur Mian Muhammad Shafi, C.I.E.
Rao Bahadur B. N. Sarma.
Dr. Tej Bahadur Sapru.
C. A. Innes, C.I.E., I.C.S., Acting.

Extraordinary Member—
H. E. Lord Rawlinson, G.C.B., G.C.V.O., K.C.M.G., Commander-in-Chief in India.

SECRETARIAT.

REVENUE AND AGRICULTURE DEPARTMENT.
Secretary, J. Hullah, I.C.S.
Under-Secretary, J. W. Hearn, I.C.S.
Registrar, C. H. Martin.
Superintendents, A. B. E. Thomson, J. H. Green, H. H. Lincoln and T. McDonnell.

FINANCE DEPARTMENT.

Ordinary Branch.

Secretary, E. M. Cook, C.I.E., I.C.S.
Joint Secretaries, J. E. C. Jukes, C.I.E., I.C.S., and G. G. Sim, C.I.E., I.C.S.
Deputy Secretary, A. F. L. Brayne, I.C.S.
Assistant Secretary, A. V. V. Aiyar, B.A.
Registrar, E. W. Baker, I.S.O.
Superintendents, G. J. Piper, C. N. Charabarty, V. K. Menon, W. M. Mather, Ram Nath, P. C. Chetty, Shah Muhammad and Sital Singh.
Comptroller and Auditor-General, M. F. Gauntlett, C.B.E., C.I.E., I.C.S.
Controller of Currency, A. C. McWatters, C.I.E., I.C.S.

Military Finance Branch.

Financial Adviser, E. Burdon, I.C.S.
Additional Financial Advisers, B. N. Mitra, C.I.E., C.B.E., M.A., and A. A. L. Parsons, I.C.S.

Military Accountant General (*offg.*), Col. R. E. Carr-Hall, C.I.E., I.A.

Deputy Financial Advisers, Lt.-Col. G. W. Ross, D.S.O., I.A., Lt.-Col. S. G. V. Ellis, D.S.O., I.A., M. R. Coburn, O.B.E., and Commander A. W. Wood, R.N.

Assistant Financial Advisers, H. S. Cumber, G. E. Hodges, M.B.E. (*on leave*), G. M. Turner, F. J. Woolmer, H. I. Macdonald, H. F. Brisley (*Provisional*), R. T. Waugh (*offg.*) and H. D. Banerjee (*offg.*)

Superintendents, Major and Commissary T. A. Duffy (*on field service*), Rai Sahib Lala Hari Shanker Kaisth, A. K. Ghosh, Gauri Shankar, B.A., (*Provisional*), A. J. Mendes (*offg.*), and Rai Sahib K. C. Maulik, B.A.

FOREIGN DEPARTMENT

Political Secretary, Sir J. B. Wood, K.C.I.E.

Foreign Secretary, Sir H. R. C. Dobbs, C.S.I., C.I.E., (*on deputation*), Denys Bray, C.I.E., C.B.E. (*offg.*)

Deputy Secretary (*Foreign*), Major F. H. Humphrys, C.I.E.

Deputy Secretary (*General*), Major C. H. Gabriel

Under Secretary, K. S. Fitze.

Assistant Secretary, Major P. G. Loch.

Attache Khan Bahadur Nur-ul-Islam.

Registrar, T. G. B. Waugh.

Inspector-General, Imperial Service Troops, Major-General Sir H. D. E. Watson, K.B.E., C.B., C.M.G., C.I.E., M.V.O.

Superintendents, D. A. Clarke, E. Betram Higgs, F. P. Buckner, J. W. S. Inglis, R. C. Albert, F. S. Hosley, K. D. Fink, M. C. H. Hacourt, G. M. Coates, M. Smith, R. S. Budd, C. W. Kirkpatrick and Inam-ul-Hak.

HOME DEPARTMENT.

Secretary, The Hon. Mr. S. P. O. Donnel (*on leave*); H. D. Craik (*offg.*)

Deputy Secretary, C. W. Goynne.

Under Secretary, A. Macleod, I.C.S.

Registrar (*officiating*), A. Lawrence.

Superintendents, Rai Prasanna Kumar Basu Bahadur, Ramani Mohan Ganguli, U. C. Stuart, K. P. Anantan, W. D. Almedia, J. C. McDermott, T. P. Roy, Rai Bijay Krishna Banerji Bahadur and N. Banerji.

Officers on Special Duty Dr. L. F. Rushbrook Williams, O.B.E., and R. S. Bajpai, BAR-AT-LAW.

Inspector, Office Procedure.—R. J. Watson.

EDUCATION DEPARTMENT.

Secretary, H. Sharp, C.S.I., C.I.E.

Educational Commissioner with the Government of India, J. A. Richey, C.I.E.

Deputy Secretary, Maharaj Singh, C.I.E

Assistant Secretary, Dr. Wali Muhammad.

Superintendents, G. E. Jackson, A. H. Bartlett, P. N. Sen, and L. M. Roy.

Registrar, Rai Bahadur M. N. Chakrabarti.

Curator, Bureau of Education, G. R. Kaye, F.R.A.S.

LEGISLATIVE DEPARTMENT.

Secretary, H. Moncrieff Smith, C.I.E., I.C.S.

Deputy Secretary, S. C. Gupta.

Registrar, C. H. F. Pereira.

Superintendents, A. L. Banerji, E. H. Brandon, D. D. Baird, D. P. Dutt and F. A. Thorpe.

ARMY DEPARTMENT.

Secretary, Major-General Sir A. H. Bingley (*on leave*) Col. A. Shairp, C.M.G., *officiating*.

Deputy Secretary (*officiating*), A. A. Whelan.

Assist. Secretaries, Lt.-Col. F. G. Moore, Lt.-Col. G. W. Marshall, I.S.O., V.D., Capt. R. Tharle-Hughes, M.B.E., and Capt. H.W. Markwrick.

Registrar, A. B. Kurning.

Superintendents, J. E. G. Kirk, P. Hypher, J. C. R. Leslie, A. P. Bates, Rai Saheb J. C. Das Gupta and W. G. Macleod.

PUBLIC WORKS DEPARTMENT.

Secretary, Col. Sir S. D'A. Crookshank, K.C.M.G., C.B., C.I.E., D.S.O., M.V.O.

Deputy Secretary, R. P. Hadow.

Under Secretary, A. Brebner, C.I.E. (*on privilege leave*); *offg.* E. P. Burke.

Assistant Secretary, W. G. Dollman.

Superintendents, W. I. Tilden, Atanu Mohan Banerji Nihal Chand, L. Bloemink, W. R. Chambers and A. M. Price.

Inspr.-Genl. of Irrign (*offg.*), F. St. J. Gebbie, C.I.F., M.V.O.

Elecl. Adviser, J. W. Meares, F.R.A.S., M.I.C.E., M.I.E.E.

COMMERCE AND INDUSTRY DEPARTMENT.

Secretary, C. A. Innes, C.I.E., I.C.S.

Deputy Secretary, R. B. Ewbank, I.C.S.

Under Secretary, J. B. Taylor, I.C.S.

Registrar, E. P. Jones.

Superintendents, B. B. Banarji, Capt. C. H. Baldrey, Khan Saheb Chaudhri Fateh Din, K. D. Banerji, J. F. Reed and T. D. Ahmed.

RAILWAY BOARD.

President, The Hon. Col. W. D. Waghorn, C.B., C.M.G., R.E., *Members*, E. A. S. Bell, C.I.E., and A. M. Clark.

Secretary, H. L. Cole.

Chief Engineer, G. Richards.

POST OFFICE & TELEGRAPH DEPT.

Director-General of Posts & Telegraphs, Hon. Mr. G. R. Clarke, O.B.E.

NORTHERN INDIA SALT REVENUE.

Commissioner, J. C. Ferguson, Actg.

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

Persian Gulf and Persian Sections.

Directors, E. E. Gunter, H. W. Smith, C.I.E., W. King-Wood, C.I.E. (*offg.*), Commander of Cable Steamer "Patrick Stewart," F. W. Townsend.

SURVEY DEPARTMENT.

Surveyor-General of India, Col. C. H. D. Ryder, C.I.E., D.S.O.

GEOLOGICAL SURVEY.

Director, E. H. Pascoe, M.A., F.G.S.

Superintendents, E. Vredenburg, B.Sc., F.G.S.; L. L. Fermor, D.Sc., F.G.S. and G. E. Pilgrim, D.Sc.

Chemist, W. A. K. Christie, B.Sc., Ph.D.

BOTANICAL SURVEY.

Director, Lt.-Col. A. T. Gage, M.B., I.M.S.; *Economic Botanist, (offg.)* P. M. Deb Barman; *Economic Botanist, Madras*, F. R. Parnell, *Economic Botanist, Bombay*, W. Burns, B.Sc.; *Economic Botanist, United Provinces*, H. M. Leake, M.A., F.L.S.

ARCHÆOLOGICAL SURVEY.

Director-General of Archæology, Sir J. H. Marshall; M.A., C.I.E.; D. B. Spooner, *Deputy Director-General*; *Superintendent, Western Circle*, Rakhal Das Banerjee, M.A.; *Superintendent, Southern Circle*, A. H. Longhurst; *Superintendent, Northern Circle*, Daya Ram Sahni; *Assistant Superintendent*, J. A. Page; *Superintendent, Burma*, C. Duroiselle, I.S.O; *Superintendent*, Frontier Circle, H. Hargreaves.

MISCELLANEOUS APPOINTMENTS.

Director-General, Indian Medical Service, Major-General Sir W. R. Edwards, C.B., C.M.G., M.D., I.M.S. (on leave). Major, General W. H. B. Robinson, C.B., K.H.S., I.M.S. (offg.).

Sanitary Commissioner with the Government of India, Lieut.-Col. F. H. G. Hutchinson, L. M. & S.

Deputy Director-General, Indian Medical Service, Lt.-Col. R. A. Needham, C.I.E., I.M.S.

Asstt. Director-General, Indian Medical Service (Sany.), Lt.-Col. W. D. H. Stevenson, C.I.E., I.M.S.

Director, Central Research Institute, Kasauli, Lt.-Col. W. F. Harvey, M.A., M.B., D.P.H., I.M.S.

Assistants to Director, Central Research Institute, Kasauli, Major F. W. Cragg, Major H. C. S. R. Christophers, C.I.E., I.M.S., Dr. Krishna Swami Iyangar.

Director-General of Indian Observatories, G. T Walker, C.S.I., M.A., D.Sc., F.R.S.

Imperial Meteorologist, C. W. B. Normand.

Director, Kodaikanal and Madras Observatories, J. Evershed.

Director, Bombay and Alibagh Observatories, Bombay, T. K. Chinmayanandam, M.A.

Director, Aerological Observatory, Agra, J. H. Field, M.A.

Secretary, Board of Examiners, Major C. L. Peart, I.A. (on leave); A. H. Harley, (*Officiating*).

Officer in Charge of the Records of the Government of India, A. F. Scholfield, M.A. (*offg.*)

Librarian, Imperial Library, Calcutta, J. A. Chapman.

Agricultural Adviser and Director of the Agricultural Research Institute, Pusa, J. Mc Kenna.

Director, Zoological Survey of India, Indian Museum, N. Annandale, B.A., D.Sc.

Curator, Industrial Section of Indian Museum, D. Hooper, F.C.S., F.L.S.

Chief Inspector of Mines, G. F. Adam.

Controller of Printing, Stationery and Stamps, M. J. Cogswell.

Superintendent of Government Printing, J. J. Meikle.

Chief Inspector of Explosives, Lieut.-Col. C. A. Muspratt-Williams, R.A.

Director, Central Intelligence, Colonel Kaye.

Director-General of Commercial Intelligence, H. A. F. Lindsay, I.C.S.

Director of Statistics, G. F. Shirras.

Customs and Excise Chemist, R. L. Jenks, (on leave); *Offg.*, Captain G. N. Frattini, I.A.R.O.

Controller of Patents and Designs, H. G. Graves.

GOVERNORS-GENERAL OF FORT WILLIAM IN BENGAL.

Name	Assumed charge of office.
Warren Hastings	20 Oct. 1774
Sir John Macpherson, Bart. ..	8 Feb. 1785
Earl Cornwallis, K.G. (*a*) ..	12 Sep. 1786
Sir John Shore, Bart. (*b*) ..	28 Oct. 1793
Lieut.-General the Hon. Sir Alured Clarke, K.C.B. (*offg.*) ..	17 March 1798
The Earl of Mornington, P.C. (*c*)	18 May 1798
The Marquis Cornwallis, K. G. (2nd time)	30 July 1805
Sir George H. Barlow, Bart. ..	10 Oct. 1805
Lord Minto, P.C. (*d*)	31 July 1807
The Earl of Moira, K.G., P.C. (*e*) ..	4 Oct. 1813
John Adam (*offg.*)	13 Jan. 1823
Lord Amherst, P.C. (*f*)	1 Aug. 1823
William Butterworth Bayley (*offg.*)	13 Mar. 1828
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C.	4 July 1828

(*a*) Created Marquess Cornwallis, 15 Aug. 1792.

(*b*) Afterwards (by creation) Baron Teignmouth.

(*c*) Created Marquess Wellesley, 2 Dec., 1799.

(*d*) Created Earl of Minto, 24 Feb., 1813.

(*e*) Created Marquess of Hastings, 2 Dec., 1816.

(*f*) Created Earl Amherst, 2 Dec., 1826.

GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C. ..	.. 14 Nov. 1834
Sir Charles Metcalfe, Bart. (*a*) (*offg*).	20 March 1835
Lord Auckland, G.C.B., P.C. (*b*)	4 March 1836
Lord Ellenborough, P.C. (*c*)	.. 28 Feb. 1842
William Wilberforce Bird (*offg.*)	15 June 1844
The Right Hon. Sir Henry Hardinge, G.C.B. (*d*)	..23 July 1844
The Earl of Dalhousie, P.C. (*e*)	..12 Jan. 1848
Viscount Canning, P.C. (*f*)	..29 Feb. 1856

(*a*) Afterwards (by creation) Baron Metcalfe

(*b*) Created Earl of Auckland, 21 Dec., 1839

(*c*) Afterwards (by creation) Earl of Ellenborough.

(*d*) Created Viscount Hardinge, 2 May, 1846.

(*e*) Created Marquess of Dalhousie, 25 Aug. 1849.

(*f*) Afterwards (by creation) Earl Canning.

NOTE.—The Governor-General ceased to be the direct Head of the Bengal Government from the 1st May, 1854, when the first Lieutenant-Governor assumed office. On 1st April, 1912, Bengal was placed under a separate Governor and the appointment of Lieutenant-Governor was abolished.

VICEROYS AND GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Viscount Canning, P.C. (*a*) ..	1 Nov. 1858
The Earl of Elgin and Kincardine, K.T., G.C.B., P.C. ..	12 March 1862
Major-General Sir Robert Napier, K.C.B. (*o*) (*offg*) ..	..21 Nov. 1863
Colonel Sir William T. Denison; K.C.B. (*offg.*)	.. 2 Dec. 1863
The Right Hon. Sir John Lawrence, Bart., G.C.B., K.C.S.I. (*c*)	.. 12 Jan. 1864
The Earl of Mayo, K.P.	.. 12 Jan. 1869
John Strachey (*d*) (*offg.*)	.. 9 Feb. 1872
Lord Napier of Merchistoun, K. T. (*e*) (*offg.*)	..23 Feb. 1872
Lord Northbrook, P.C. (*f*)	.. 3 May 1872
Lord Lytton, G.C.B. (*g*) ..	..12 Apl. 1876
The Marquess of Ripon, K.G., P.C.	8 June 1880
The Earl of Dufferin, K.P., G.C.B., G.C.M.G., P.C. (*h*) ..	..13 Dec. 1884
The Marquess of Lansdowne, G. C. M. G.	..10 Dec. 1888
The Earl of Elgin and Kincardine, P. C.	..27 Jan. 1894
Baron Curzon of Kedleston, P C.	6 Jan. 1899
Baron Ampthill (*offg.*)	30 Apl. 1904
Baron Curzon of Kedleston, P.C. (*i*)	13 Dec. 1904
The Earl of Minto, K. G , P. C , G. C. M. G.	..18 Nov. 1905
Baron Hardinge of Penshurst, P.C., G.C.B., G.C.M G., G.C.V O., I.S.O (*j*)	23 Nov. 1910
Lord Chelmsford	Apl. 1916
Lord Reading	Apl. 1921

(*a*) Created Earl Canning, 21 May 1859.

(*b*) Afterwards (by creation) Baron Napier (of Magdala).

(*c*) Afterwards (by creation) Baron Lawrence.

(*d*) Afterwards Sir John Strachey, G C.S.I., C.I F.

(*e*) Afterwards (by creation) Baron Napier of Ettrick.

(*f*) Afterwards (by creation) Earl of Northbrook.

(*g*) Created Earl of Lytton, 28 April, 1880.

(*h*) Created Marquis of Dufferin and Ava, 12 Nov. 1888.

(*i*) Created an Earl .. .. June 1911

(*j*) During tenure of office, the Viceroy is Grand Master and First and Principal Knight of the two Indian Orders (G.M.S.I., and G.M.I.E.). On quitting office, he becomes G.C.S.I. and G.C.I.E., with the date of his assumption of the Viceroyalty.

*

The gradual evolution of the Indian constitution is fully traced in the article on 'The Government of India," which precedes this; so also are the great changes made by the Reform Act of 1919. For the purposes of easy reference the powers of the Legislatures, as well as the special powers reserved to the Governor-General for the discharge of his responsibilities, which are fully set out in the Act, are reproduced below:—

21. (1) Every Council of States shall continue for five years, and every Legislative Assembly for three years, from its first meeting:

Provided that—

(*a*) either chamber of the legislature may be sooner dissolved by the Governor-General and

(*b*) any such period may be extended by the Governor-General if in special circumstances, he so thinks fit; and

(*c*) after the dissolution of either chamber the Governor-General shall appoint a date not more than six months, or with the sanction of the Secretary of State, not more than nine months after the date of dissolution for the next session of that chamber.

22. (1) An official shall not be qualified for election as a member of either chamber of the Indian legislature, and, if any non-official member of either chamber accepts office in the service of the Crown in India his seat in that chamber shall become vacant.

(4) Every member of the Governor-General's Executive Council shall be nominated as a member of one chamber of the Indian legislature, and shall have the right of attending in and addressing the other chamber, but shall not be a member of both chambers.

24. (3) If any Bill which has been passed by one chamber is not, within six months after the passage of the Bill by that chamber, passed by the other chamber either without amendments or with such amendments as may be agreed to by the two chambers, the Governor-General may in his discretion refer the matter for decision to a joint sitting of both chambers, Provided that standing orders made under this section may provide for meetings of members of both chambers appointed for the purpose, in order to discuss any difference of opinion which has arisen between the two chambers.

(4) Without prejudice to the powers of the Governor-General under section sixty-eight of the principal Act, the Governor-General may where a Bill has been passed by both chambers of the Indian legislature, return the Bill for reconsideration by either chamber.

(7) Subject to the rules and standing orders affecting the chamber, there shall be freedom of speech in both chambers of the Indian legislature. No person shall be liable to any proceeding in any court by reason of his speech or vote in either chamber, or by reason of any thing contained in any official report of the proceedings of either chamber.

25. INDIAN BUDGET:—(1) The estimated annual expenditure and revenue of the Governor-General in Council shall be laid in the form of a statement before both chambers of the Indian legislature in each year.

(2) No proposal for the appropriation of any revenue or moneys for any purpose shall be made except on the recommendation of the Governor-General

(3) The proposals of the Governor-General in Council for the appropriation of revenue or moneys relating to the following heads of expenditure shall not be submitted to the vote of the legislative assembly, nor shall they be open to discussion by either chamber at the time when the annual statement is under consideration, unless the Governor-General otherwise directs—

(*i*) interest and sinking fund charges on loans; and

(*ii*) expenditure of which the amount is prescribed by or under any law; and

(*iii*) salaries and pensions of persons appointed by or with the approval of His Majesty or by the Secretary of State in Council; and

(*iv*) salaries of chief commissioners and judicial commissioners; and

(*v*) expenditure classified by the order of the Governor-General in Council as—

(*a*) ecclesiastical;

(*b*) political;

(*c*) defence.

(4) If any question arises whether any proposed appropriation of revenue of moneys, does or does not relate to the above heads the decision of the Governor-General on the question shall be final.

(5) The proposals of the Governor-General in Council for the appropriation of revenue or moneys relating to heads or expenditure not specified in the above heads shall be submitted to the vote of the legislative assembly in the form of demands for grants.

(6) The legislative assembly may assent or refuse its assent to any demand or may reduce the amount referred to in any demand by a reduction of the whole grant.

(7) The demands as voted by the legislative assembly shall be submitted to the Governor-General in Council, who shall, if he declares that he is satisfied that any demand which has been refused by the legislative assembly is essential to the discharge of his responsibilities, act as if it had been assented to, notwithstanding the withholding of such assent or the reduction of the amount therein referred to, by the legislative assembly.

(8) Notwithstanding anything in this section the Governor-General shall have power, in cases of emergency, to authorise such expenditure as may, in his opinion, be necessary for the safety or tranquillity of British India or any part thereof

26. EMERGENCY POWERS:—(1) Where either chamber of the Indian legislature refuses leave to introduce or fails to pass in a form recommended by the Governor-General, any Bill, the Governor-General may certify that the passage of the Bill is essential for the safety, tranquillity or interests of British India or any part thereof, and thereupon—

(*a*) if the Bill has already been passed by the other chamber, the Bill shall, on signature by the Governor-General, notwithstanding that it has not been consented to by both chambers, forthwith become an Act of the Indian legislature in the form of the Bill as originally introduced or proposed to be introduced in the Indian legislature, or (as the case

may be) in the form recommended by the Governor-General; and

(*b*) if the Bill has not already been so passed, the Bill shall be laid before the other chamber, and, if consented to by that chamber in the form recommended by the Governor-General, shall become an Act as aforesaid on the signification of the Governor-General's assent, or, if not so consented to shall, on signature by the Governor-General, become an Act as aforesaid.

(2) Every such Act shall be expressed to be made by the Governor-General and shall, as soon as practicable after being made, be laid before both Houses of Parliament, and shall not have effect until it has received His Majesty's assent, and shall not be presented for His Majesty's assent until copies thereof have been laid before each House of Parliament for not less than eight days on which that House has sat; and upon the signification of such assent by His Majesty in Council and the notification thereof by the Governor-General, the Act shall have the same force and effect as an Act passed by the Indian legislature and duly assented to:

Provided that, where in the opinion of the Governor-General a state of emergency exists which justifies such action, the Governor General may direct that any such Act shall come into operation forthwith, and thereupon the Act shall have such force and effect as aforesaid, subject, however, to disallowance by His Majesty in Council.

27. SUPPLEMENTAL PROVISIONS:—(1) In addition to the measures referred to in sub-section (2) of section sixty-seven of the principal Act, as requiring the previous sanction of the Governor-General it shall not be lawful without such previous sanction to introduce at any meeting of either chamber of the Indian legislature any measure—

(*a*) regulating any provincial subject, or any part of a provincial subject, which has not been declared by rules under the principal Act to be subject to legislation by the Indian legislature;

(*b*) repealing or amending any Act of a local legislature;

(*c*) repealing or amending any Act or ordinance made by the Governor-General.

(2) Where in either chamber of the Indian legislature any Bill has been introduced or is proposed to be introduced, or any amendment to a Bill is moved, or proposed to be moved, the Governor-General may certify that the Bill or any clause of it, or the amendment affects the safety or tranquillity of British India, or any part thereof, and may direct that no proceedings, or that no further proceedings, shall be taken by the chamber in relation to the Bill, cause, or amendment, and effect shall be given to such direction.

THE LEGISLATIVE ASSEMBLY.

President:—The Hon'ble Mr. Alexander Frederick Whyte.

A—ELECTED MEMBERS (103).

Constituency.	Name.
Madras City (Non-Muhammadan Urban) ..	Rao Bahadur Tiruvenkata Rangachariar Avargal.
Ganjam *cum* Vizagapatam (Non-Muhammadan Rural).	Mr. Bhupatiraju Venkatapatiraju Garu.
Godavari *cum* Kistna (Non-Muhammadan Rural).	Mr. Ramayya Pantulu Garu-Jayanti.
Guntur *cum* Nellore (Non-Muhammadan Rural).	Rao Bahadur Patri Venkata SrinvasaRao Garu.
Madras ceded districts and Chittoor (Non-Muhammadan Rural).	Subramanyayya, Calaga, Sundara Ayyar, Rao Bahadur.
Salem and Coimbatore *cum* North Arcot (Non Muhammadan Rural).	Mr. Sambanda Mudaliar.
South Arcot *cum* Chingleput (Non Muhammadan Rural).	Mr. M. Krishnaswamy Reddiyar
Tanjore *cum* Trichinopoly (Non-Muhammadan Rural).	Sir Sivaswami Ayyar, K.C.S.I., K.C.I.E.
Madura and Ramnad *cum* Tinnevelly (Non-Muhammadan Rural).	Manamadura Govinda Mukundaraja Ayyangar, Avargal.
West Coast and Nilgiris (Non-Muhammadan Rural).	Mr. Kumaran Raman *alias* Kavalappara Muppil Nayar Avargal.
North Madras (Muhammadan)	Mr. T. Muhammad Hussain Sahib Bahadur.
South Madras (Muhammadan)	Mir Asad Ali, Khan Bahadur.

Constituency.	Name.
West Coast and Nilgiris (Muhammadan) ..	Mr. Mahmood Schamnad Sahib Bahadur.
Madras (European)	Mr. Eardley Norton.
Madras Landholders	Mr. Rama Varma Valia Raja, Chirakkal.
Madras (Indian Commerce)	Mr. Narayan Girdhardas
Bombay City (Non-Muhammadan Urban) ..	Mr. Jamnadas Dwarkadas Dharamsy.
Sind (Non-Muhammadan Rural)	Mr. Harchandrai Vishindas.
Bombay Northern Division (Non-Muhammadan Rural).	Sardar Bomanji Ardeshir Dalal.
Bombay Central Division (Muhammadan Rural).	Sardar Gulam Jilani Bijlikhan.
Bombay Central Division (Non-Muhammadan Rural).	Mr. Balkrishna Sitaram Kamat.
Do. do.	Mr. Keshao Ganesh Bagde.
Bombay Southern Division (Non-Muhammadan Rural).	Mr. Anna Babaji Latthe.
Bombay City (Muhammadan Urban)	Mr. Salebhoy Karimji Barodawalla.
Sind (Muhammadan Rural)	Mr. Alibaksh Mahomed Hussein.
Do.	Mr. Wali Mahomed Hussainally.
Bombay (European)	Mr. Reginald Arthur Spence.
Do.	Mr. Edwin Lessware Price.
The Indian Merchants Chamber and Bureau (Indian Commerce).	Mr. Manmohandas Ramji.
Sind Jagirdars and Zamindaras (Landholders).	Mr. Sahibsing Chandasing Shahani.
The Bombay Millowners' Association (Indian Commerce).	Mr. Rahimtoola Currimbhoy.
Calcutta (Non Muhammadan Urban)	Sir Deva Prasad Sarbadhikari, Kt.
Calcutta Suburbs (Non-Muhammadan Urban)..	Babu Jogendra Nath Mukherjee.
Burdwan Division (Non-Muhammadan Rural)...	Rai Taraprosanna Mukherjee Bahadur.
Presidency Division (Non-Muhammadan Rural)	Rai Jadu Nath Majumdar Bahadur.
Dacca Division (Non-Muhammadan Rural) ..	Babu Khitish Chandra Neogy.
Chittagong and Rajshahi Divisions(Non-Muhammadan Rural).	Mr. Jogesh Chandra Chaudhuri, Bar-at-Law.
Calcutta and Suburbs (Muhammadan Urban.)	Prince Afsar-ul-Mulk Mirza Muhammad Akhram Hussain Bahadur.
Burdwan and Calcutta Presidency Divisions (Muhammadan Rural.)	Mr. Saiyed Muhammad Abdulla.
Dacca Division (Muhammadan Rural)	Khan Bahadur Zahiruddin Ahmed.
Chittagong Division (Muhammadan Rural) ..	Munshi Abdul Rahman.

Constituency.	Name.
Rajshahi Division (Muhammadan Rural) ..	Mr. Kabeeeruddin Ahmed.
Bengal (European)	Sir Frank Carter, KT., C.I.E.
Do.	Mr. A. D. Pickford.
Bengal Landholders	Babu Satish Chandra Ghosh.
Bengal National Chamber of Commerce ..	Mr. Nibaran Chandra Sircar.
Cities of the United Provinces (Non-Muhammadan Urban).	Munshi Iswar Saran.
Meerut Division (Non-Muhammadan Rural). ..	Mr. Pyare Lal, Bar-at-Law.
Agra Division (Non-Muhammadan Rural) ..	Lala Girdhari Lass.
Rohilkund and Kumaon Divisions (Non-Muhammadan Rural).	Pandit Radha Kishen Dass.
Allahabad and Jhansi Divisions (Non-Muhammadan Rural).	Rai Bahadur Bishambhar Nath.
Benares and Gorakhpur Divisions (Non-Muhammadan Rural).	Babu Mahadeo Prasad.
Lucknow Division (Non-Muhammadan Rural) .	Rai Bahadur Sankata Pershad Bajpai.
Fyzabad Division (Non-Muhammadan Rural)..	Raja Suraj Baksh Singh, O.B.E.
Cities of the United Provinces (Muhammadan Urban).	Haji Wajih-ud-din.
Meerut Division (Muhammadan Rural) ..	Mr. Mohammad Yamin Khan, Bar-at Law.
Agra Division (Muhammadan Rural)	Mr. Mohammad Faiyaz Khan.
Rohilkhund and Kumaon Divisions (Muhammadan Rural).	Syed Nabi Hadi.
United Provinces Southern Divisions (Muhammadan Rural).	Mr. S. M. Zahid Ali Subzposh.
Lucknow and Fyzabad Divisions (Muhammadan Rural).	Syed Haider Karrar Jafri.
United Provinces (European)	Sir Logie Pirie Watson, KT.
United Provinces Landholders	Raja Kushalpal Singh.
Ambala Division (Non-Muhammadan)	Rai Bahadur Pandit Jawahar Lal Bhargava.
Jullundur Division (Non-Muhammadan) ..	Rai Bahadur Bakshi Sohan Lal.
West Punjab (Non-Muhammadan)	Dr. Nand Lal, Bar-at-Law.
East Punjab (Muhammadan)	Lieut. Nawab Mohammad Ibrahim Ali Khan.
East Central Punjab (Muhammadan)	Chaudhri Shahab-ud-din.
West Central Punjab (Muhammadan)	Khan Sahib Mir Mahamad Ikramulla Khan.
North Punjab (Muhammadan)	Choudhuri Ghulam Sarwar.
North-West Punjab (Muhammadan)	Mr. Ahmad Baksh Khan, Bar-at-Law.
South-West Punjab (Muhammadan)	Mukhdum Sayed Rajan Bakhsh Shah.
East Punjab (Sikh)	Bhai Man Singh.
West Punjab (Sikh)	Sardar Gulab Singh.
Punjab Landholders	Baba Ujagar Singh.
Tirhut Division (Non-Muhammadan)	Babu Baidyanath Prashad Singh.
Do. do.	Babu Adit Prashad Sinha.
Orissa Division do.	Babu Braja Sundar Das.
Do. do.	Rai Bahadur Nimai Charan Mitter.
Patna *cum* Shahabad (Non-Muhammadan) ..	Mr. Sachchidananda Sinha, Bar-at-La
Gaya *cum* Monghyr (Non-Muhammadan) ..	Rai Bahadur Lachmi Prasad Sinha.
Bhagalpur, Purnea and the Santhal Parganas (Non-Muhammadan).	Rai Bahadur Nishikanta Sen.
Chota Nagpur Division (Non-Muhammadan) ..	Rai Bahadur Sarat Chandra Sen.
Patna and Chota Nagpur *cum* Orissa (Muhammadan).	Khan Bahadur Saiyid Muhammad Ismail.
Bhagalpore Division (Muhammadan)	Maulvi Miyan Asjad-ul-lah.

Consititucency.	Name.
Tirhut Division (Muhammadan)	Khan Bahadur Sarfaraz Hussain.
Bihar and Orissa Landholders.	Raja Sivanandan Prasad Singh, O.B.E.
Nagpur Division (Non-Muhammadan) ..	Dr. H. S. Gour, Bar-at-Law.
Central Provinces Hindi Divisions. (Non-Muhammadan).	Mr. Pyarelal Misra.
Do. do. ..	Mr. Kunj Bihari Lall Agnihotri.
Central Provinces (Muhammadan)	Mr. Muhammad Ahsan Khan.
Central Provinces Landholders	Mr. Beohar Raghubir Sinha.
Assam Valley (Non-Muhammadan)	Srijut Debi Charan Barua.
Surma Valley *cum* Shilling (Non-Muhammadan)	Rai Bahadur Girish Chandra Nag.
Assam (Muhammadan)	Mr. Amzad Ali.
Assam (European)	Lt.-Col. D. Herbert.
Burma (Non-European)	Mr. Padamji Pestonji Ginwala.
Do.	Mr. J. C. Chatterji.
Do.	Maung Maung Sin.
Burma (European)	Mr. Frank McCarthy.
Delhi (General)	Shaikh Abdul Majid.

B.—NOMINATED MEMBERS (EXCLUDING THE PRESIDENT) (41).

(*a*) *Official Members* (25 *excluding the President*).

Government of India	The Hon'ble Mr. W. M. Hailey, C.S.I., C.I.E.
Do.	The Hon'ble Sir T. Holland, K.C.S.I., K.C.I.E.
Do.	The Hon'ble Dr. T. B. Sapru.
Do.	Mr. H. Sharp, C.S.I., C.I.E.
Do	Sir Sydney Crookshank, K.C.M.G., C.B., C.I.E., D.S.O., M.V.O.
Do.	Mr. C. A. Innes, C.I.E.
Do.	Mr. J. Hullah.
Do.	Col. W. D. Waghorn, C.B., C.M.G., R.E.
Do.	Mr. S. P. O'Donnell, C.I.E.
Do.	Mr. H. N. Hutchinson, O.B.E.
Do.	Mr. E. Burdon.
Do.	
Madras	Rao Bahadur C. Krishnaswami Rao.
Do.	J. P. Cotelingham.
Do.	J. F. Bryant, M.A., I.C.S.
Do.	T. V. Seshagiri Ayyar.
Bombay	
Do.	
Bengal	
Do.	
United Provinces	
Do.	
The Punjab	
Bihar and Orissa	
The Central Provinces	
Assam	
Burma	
	(*b*) *Non-Official Members* (15).
Berar representative	Mr. Bhimrao Hanumant Rao Jatkar.

THE COUNCIL OF STATE.

President—The Hon'ble Mr. A. P. Muddiman, C.S.I., C.I.E.

A.—ELECTED MEMBERS (33).

Constituency.	Name.
Madras (Non-Muhammadan)	Rao Bahadur S. Rm. M. A. Annamalai Chettiyar.
Do.	Mr. K. V. Rangaswamy Ayyangar.
Do.	Mr. V. S. Srinivasa Sastri.
Do.	Diwan Bahadur V. Ramabhadra Nayudu.
Madras (Muhammadan)	Khan Bahadur Ahmad Tambi Marakkayar.
Bombay (Non-Muhammadan)	Mr Lallubhai Samaldas Mehta.
Do.	Mr. Phiroze C. Sethna.
Do.	Mr. Waman Govind Kale.
Bombay Presidency (Muhammadan)	Khan Bahadur Ebrahim Haroon Jaffer.
Sind (Muhammadan)	Mr. Ghulam Mahomed Khan Bhurgri.
Bombay Chamber of Commerce	Mr. Arthur Henry Froom
East Bengal (Non-Muhammadan)	Raja Promada Nath Roy.
West Bengal (Non-Muhammadan)	Maharaja Sir Mahindra Chandra Nandy, K.C.I.E.
East Bengal (Muhammadan)	Mr. Altaf Ali
Bengal Chamber of Commerce	Sir Alexander Robertson Murray, Kt., C.B.E.
United Provinces Central (Non-Muhammadan).	Raja Sir Rampal Singh, K.C.I.E.
United Provinces Northern (Non-Muhammadan	Lala Sukhbir Singh.
United Provinces Southern(Non-Muhammadan)	Raja Moti Chand, C.I.E.
United Provinces West (Muhammadan) ..	Nawab Muhammad Abdul Majid, C.I.E.
Punjab (Non-Muhammadan)	Rai Bahadur Lala Ram Saran Das, C.I.E.
Punjab (Sikh)	Sardar Jogendra Singh.
East Punjab (Muhammadan)	Sir Zulfiqar Ali Khan, Kt., C.S.I.
West Punjab (Muhammadan)	Colonel. Sir Umar Hayat Khan, K.C.I.E., C.B.E. M.V.O.
Bihar and Orissa (Non-Muhammadan) ..	Maharajadhiraja Sir Rameshawara Singh G.C.I.E., K.B.E., of Darbhanga.
Do.	Maharaja Bahadur Keshav Prasad Singh, of Dumraon.
Bihar and Orissa (Muhammadan)	Khan Bahadur Saiyid Zahir-ud-din, C.B.E..
Central Provinces (General)	Sir Manekjee Byramjee Dadabhoy, Kt., C.I.E.
Assam (Non-Muhammadan)	Mr. Malcolm Macgragor Hadow.
Burma (General)	Maung Po Bye.
Burma Chamber of Commerce	Mr. Edgar Joseph Holberton.

B.—NOMINATED MEMBERS (26 *excluding the President*).

(*a*) *Official Members* (*not more than* 19 *excluding President*).

Government of India	His Excellency Lord Rawlinson, G.C.B.. G.C.V.O. K.C.M.G.
Do.	Sir George Barnes, K.C.B., K.C.S.I.
Do.	Sir William Vincent, K.C.S.I.
Do.	Khan Bahadur Mian Muhammad Shafi, C.I.E.
Do.	Rao Bahadur B. N. Sarma.
Do.	Sir John Barry Wood, K.C.I.E., C.S.I.
Do.	Major General William Rice Edwards, C.B. C.M.G., K.H.P.
Do.	Mr. Edward Mitchener Cook, C.I.E.
Do.	Mr. Denys De Saumare Bray. C.I.E.. C.B.E.
Do.	Mr. Henry Moncrieff Smith, C.I.E.
.....	Mr. Atul Chandra Chattarjee, C.I.E.
.....	Mr. Claud Alexander Barron, C.S.I., C.I.E.
Madras	Mr. Ernest Sampson Lloyd.
Do.	Raja Govinda Krishna Yachendrulavaru.
Bombay	Mr. Charles Norman Seddon.
Bengal	Khan Bahadur Amin-ul-Islam.
The United Provinces	Mahamahopadhyaya Dr. Ganga Nath Jha.
Bihar and Orissa	Mr. Egbert Laurie Lucas Hammond
(*b*) Berar representative	Mr. Ganesh Srikrishna Khaparde.

The Provincial Governments.

The object of the Reforms is the progressive realisation of responsible Government. Responsible government implies two conditions, first, that the members of the executive government should be responsible to their constituents, and secondly that these constituents should exercise their power through the agency of their representatives in the Assembly. These two conditions entail that there exist constituencies based on a franchise broad enough to represent the interests of the population generally, and capable of selecting representatives intelligently; secondly, that there is recognised and constitutional practice that the executive Government cannot retain office unless it commands the support of a majority in the Assembly. In India, these conditions are not realised. There must be a period of political education which can only be achieved through the gradually expanding exercise of responsibility. Practical considerations make the immediate handing over of complete responsibility impossible. Accordingly, the principle is adopted of transferring responsibility for certain functions of Government while reserving control over others, while at the same time establishing substantial provincial autonomy.

Provincial Autonomy:—Since substantial provincial autonomy is to be a reality, the provinces must not be dependent on the Indian Government for the means of provincial development. The general idea of the scheme on this matter is that an estimate should first be made of the scale of expenditure required for the upkeep and development of the services which clearly appertain to the Indian sphere; that resources with which to meet this expenditure should be secured to the Indian Government; and that all other revenues should then be handed over to the provincial Governments which will thenceforth be held wholly responsible for the development of all provincial services. The principal changes in detail is the abolition of divided heads of revenue. Indian and provincial heads of revenue are retained as at present; but to the former income-tax and general stamps are to be added and to the latter land revenue, irrigation, excise and judicial stamps. It follows that expenditure on famine relief and the protective irrigation works will fall upon the provinces, though in the matter of famine relief, the Indian Government could never wholly renounce responsibility in the case of any failure on the part of the provinces.

This arrangement leaves the Government of India with a large deficit. In order to supplement this, the contribution from each province to the Government of India is assessed and fixed on the following basis:—

In the financial year 1921-22 contributions shall be paid to the Governor General in Council by the local Governments mentioned below according to the following scale:—

Name of Province.	Contributions (In lakhs of rupees).
Madras	348
Bombay	58
Bengal	63
United Provinces	240
Punjab	175
Burma	64
Central Provinces and Berar ..	22
Assam	15

From the financial year 1922-23 onwards a total contribution of 983 lakhs, or such smaller sum as may be determined by the Governor General in Council, shall be paid to the Governor General in Council by the local Governments mentioned in the preceding rule. When for any year the Governor General in Council determines as the amount of the contribution a smaller sum than that payable for the preceding year, a reduction shall be made in the contribution of those local Governments only whose last previous annual contribution exceeds the proportion specified below of the smaller sum so determined as the total contribution, and any reduction so made shall be proportionate to such excess:—

Madras	..17—90ths.
Bombay	..13—90ths.
Bengal	..19—90ths.
United Provinces	..18—90ths.
Punjab	.. 9—90ths.
Burma	..6½—90ths.
Central Provinces and Berar	.. 5—90ths
Assam	..2½—90ths.

In cases of emergency the local Government of any province may be required by the Governor-General in Council, with the sanction of, and subject to the conditions approved by the Secretary of State, to pay to the Governor-General in Council a contribution for any financial year in excess of the amount required by the preceding rules in the case of that year.

The System of Government:—In all the provinces there is collective administration, the system of a Governor in Council. At the head of the Executive is the Governor, with an Executive Council nominated by the Governor. Associated with the Executive Council as part of the Government are one or more Ministers chosen by the Governor from among the elected members of the Legislative Council and holding office for the life of the Council.

The plan is adopted of making a division of the functions of the Provincial Government, between those which may be made over to popular control and those which for the present must remain in official hands. These functions are called "transferred" and "reserved" respectively. In the Provincial Executive the Governor in Council has charge of the reserved subjects. This is one part of the Executive. The other part of the Executive consists of the Governor and Minister or Ministers and deals with the "transferred" subjects. As a general rule the Executive deliberate as a whole although there may be occasions upon which the Governor prefers to discuss a particular question with that part of the Government directly responsible. The decision upon a transferred subject and on the supply for it in the provincial budget is taken after general discussion by the Governor and his Ministers; the decision on a reserved subject is taken after similar discussion by the Governor and the members of his Executive Council.

The Ministers hold office not at the will of the legislature but at the will of their constituents. Their salary while they are in office is secured to them and is not at the pleasure of the Legislative Council. They together with the Governor form the administration for the transferred subjects. It is not intended that the Governor should from the first be bound to accept the decision of his Ministers, because he will himself be generally responsible for the administration. But it is also not intended that he should be in a position to refuse assent at discretion to all his Ministers' proposals. The intention is rather that the Ministers should avail themselves of the Governor's trained advice upon administrative questions, while he on his part is willing to meet their wishes to the furthest possible extent, in cases where he realises they have the support of popular opinion.

The keynote of the scheme, it has been explained, is the establishment of effective provincial autonomy and the introduction of responsible government in the Provinces. This connotes a sharp division of authority between the Central Government and the Provinces and the division of the provincial administration into two parts, the Reserved Subjects, namely those reserved to the Governor and his Executive Council; and the Transferred Subjects, or the subjects transferred under certain conditions to Ministers chosen from the Legislative Council. In the section dealing with the Government of India (q.v.) a list is given of the subjects reserved to the Central Government; all other subjects are delegated to the Provinces. The division of the provincial administration between Reserved and Transferred subjects is given in the following statement:—

List of Provincial Subjects Transferred.

Column I.	Column II.
1. Local self-government—that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining boards of health, and other authorities established in the provinces for purposes of local self-governments, exclusive of matters arising under the Cantonments Act, 1910; subject to legislation by the Indian legislature as regards (*a*) the powers of such authorities to borrow otherwise than from a provincial Government, and (*b*) the levying by such authorities of taxation not included in Schedule II to the Schedule Taxes Rules.	All Governors' provinces.
2. Medical administration, including hospitals, dispensaries and asylums, and for medical education.	Ditto.
3. Public health and sanitation and statistics; subject to legislation by the Indian legislature in respect to infection and contagious diseases to such extent as may be declared by any Act of the Indian legislature.	Ditto
4. Pilgrimages within British India	Ditto.

List of Provincial Subjects for Transfer—contd.

Column I.	Column II.
5. Education, other than European and Anglo-Indian education, provided that— (*a*) the following subjects shall be excluded, namely :— (*i*) the Benares Hindu University and such other Universities constituted after the commencement of these rules as may be declared by the Governor General in Council to be central subjects, and (*ii*) Chiefs' Colleges and any institution maintained by the Governor General in Council for the benefit of members of His Majesty's Forces or of other public servants or of the children of such members or servants; and (*b*) the following subjects shall be subject to legislation by the Indian legislature, namely :— (*i*) the control of the establishment and the regulation of the constitutions and functions of University constituted after the commencement of these rules, and (*ii*) the definition of the jurisdiction of any University outside the province in which it is situated, and (*iii*) for a period of five years from the date of the commencement of these rules, the Calcutta University and the control and organisation of secondary education in the Presidency of Bengal.	All Governors' provinces.
6. Public Works included under the following heads, namely :— (*a*) construction and maintenance of provincial buildings, other than residences of Governors of provinces, used or intended for any purpose in connection with the administration of the province on behalf of the departments concerned, save in so far as the Governor may assign such work to the departments using or requiring such buildings; and care of historical monuments, with the exception of ancient monuments as defined in section 2 (1) of the Ancient Monuments Preservation Act, which are for the time being declared to be protected monuments under section 3 (1) of that Act: provided that the Governor General in Council may, by notification, in the *Gazette of India*, remove any such monument from the operation of this exception; (*b*) roads, bridges, ferries, tunnels, ropeways, and causeways, and other means of communication, subject to such conditions as regards control over construction and maintenance of means of communication declared by the Governor General in Council to be of military importance, and as regards incidence of special expenditure connected therewith, as the Governor General in Council may prescribe; (*c*) tramways within municipal areas; and (*d*) light and feeder railway and extra-municipal tramways, in so far as provision for their construction and management is made by provincial legislation; subject to legislation by the Indian legislature in the case of any such railway or tramway which is in physical connection with a main line or is built on the same gauge as an adjacent main line.	All Governors' provinces, except Assam.

List of Provincial Subjects for Transfer—concld.

Column I.	Column II.
7. Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases; subject to legislation by the Indian legislature in respect to destructive insects and pests and plant diseases to such extent as may be declared by any Act of the Indian legislature.	All Governors' provinces.
8. Civil Veterinary Department, including provision for veterinary training, improvement of stock, and prevention of animal diseases; subject to legislation by the Indian legislature in respect to animal diseases to such extent as may be declared by any Act of the Indian legislature.	Ditto.
9. Fisheries	All Governors provinces, except Assam.
10. Co-operative Societies	All Governors' provinces.
11. Forests, including preservation of game therein; subject to legislation by the Indian legislature as regards disforestation of reserved forests.	Bombay.
12. Excise, that is to say, the control of production, manufacture, possession, transport, purchase, and sale of alcoholic liquor and intoxicating drugs and the levying of excise duties and license fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture, and sale for export.	All Governors' provinces, except Assam.
13. Registration of deeds and documents; subject to legislation by the Indian legislature.	All Governors' provinces
14. Registration of births, deaths, and marriages; subject to legislation by the Indian legislature for such classes as the Indian legislature may determine.	Ditto.
15. Religious and charitable endowments	Ditto.
16. Development of industries, including industrial research and technical education.	Ditto.
17. Stores and stationery required for transferred departments; subject in the case of imported stores and stationery, to such rules as may be prescribed by the Secretary of State in Council.	Ditto.
18. Adulteration of food-stuffs and other articles; subject to legislation by the Indian legislature as regards import and export trade.	Ditto.
19. Weight and measures; subject to legislation by the Indian legislature as regards standards.	Ditto.
20. Libraries (other than the Imperial Library), Museums (except the Indian Museum, the Imperial War Museum, and the Victoria Memorial, Calcutta) and Zoological Gardens.	Ditto.

POWERS OF THE LEGISLATURES.

Under the Reform Act there has been set up a Legislative Council in each Governor's Province, which consists of the members of the Executive Council and of nominated and elected members. The Governor is not a member of the Legislative Council, but he has the right of addressing the Council and may for that purpose require the attendance of the members. The number of members of the Legislative Council varies from Province to Province, but the Act provides that not more than twenty per cent. shall be official members and at least seventy per cent. shall be elected members. The powers of the Legislative Council and the special powers of Governors are clearly set out in the Act and the essential clauses are reproduced here:—

8. (1) Every Governor's legislative council shall continue for three years from its first meeting:

Provided that—

(*a*) the council may be sooner dissolved by the Governor; and

(*b*) the said period may be extended by the Governor for a period not exceeding one year, by notification in the official gazette of the province, if in special circumstances (to be specified in the notification) he so thinks fit; and

(*c*) after dissolution of the council the Governor shall appoint a date not more than six months or, with the sanction of the Secretary of State, not more than nine months from the date of dissolution for the next session of the council.

10. (1) The local legislature of any province has power, subject to the provisions of this Act, to make laws for the peace and good government of the territories for the time being constituting that province.

(2) The local legislature of any province may, subject to the provisions of the sub-section next following, repeal or alter as to that province any law made either before or after the commencement of this Act by any authority in British India other than that local legislature.

(3) The local legislature of any province may not, without the previous sanction of the Governor-General, make or take into consideration any law—

(*a*) imposing or authorising the imposition of any new tax unless the tax is a tax scheduled as exempted from this provision by rules made under the principal Act; or

(*b*) affecting the public debt of India, or the customs duties or any other tax or duty for the time being in force and imposed by the authority of the Governor General in Council for the general purposes of the Government of India, provided that the imposition or alteration of a tax scheduled as aforesaid shall not be deemed to affect any such tax or duty; or

(*c*) affecting the discipline or maintenance of any part of His Majesty's naval, military, or air forces; or

(*d*) affecting the relations of the government with foreign princes or states; or

(*e*) regulating any central subject; or

(*f*) regulating any provincial subject which has been declared by rules under the principal Act, to be, either in whole or in part, subject to legislation by the Indian legislature, in respect of any matter to which such declaration applies; or

(*g*) affecting any power expressly reserved to the Governor-General in Council by any law for the time being in force; or

(*h*) altering or repealing the provisions of any law which, having been made before the commencement of this Act by any authority in British India other than that local legislative is declared by rules under the principal Act to be a law which cannot be repealed or altered by the local legislature without previous sanction; or

(*i*) altering or repealing any provision of an Act of the Indian legislature made after the commencement of this Act, which by the provisions of that Act may not be repealed or altered by the local legislature without previous sanction:

Provided that an Act or a provision of an Act made by a local legislature, and subsequently assented to by the Governor-General in pursuance of this Act, shall not be deemed invalid by reason only of its requiring the previous sanction of the Governor-General under this Act.

(4) The local legislature of any province has not power to make any law affecting any Act of Parliament.

11. (2) The estimated annual expenditure and revenue of the province shall be laid in the form of a statement before the council in each year, and the proposals of the local government for the appropriation of provincial revenue and other moneys in any year shall be submitted to the vote of the council in the form of demands for grants. The council may assent, or refuse its assent, to a demand, or may reduce the amount therein referred to either by a reduction of the whole grant or by the omission or reduction of any of the items of expenditure of which the grant is composed:

Provided that—

(*a*) the local government shall have power in relation to any such demand, to act as if it had been assented to, notwithstanding the withholding of such assent or the reduction of the amount therein referred to, if the demand relates to a reserved subject, and the Governor certifies that the expenditure provided for by the demand is essential to the discharge of his responsibility for the subject; and

(*b*) the Governor shall have power in cases of emergency to authorise such expenditure as may be in his opinion necessary for the safety or tranquillity of the province, or for the carrying on of any department; and

(*c*) no proposal for the appropriation of any such revenues or other moneys for any purpose shall be made except on the recommendation of the Governor, communicated to the council.

(3) Nothing in the foregoing sub-section shall require proposals to be submitted to the Council relating to the following heads of expenditure:—

(*i*) contribution payable by the government to the Governor-General in Council; and

(*ii*) interest and sinking fund charges on loans; and

(*iii*) expenditure of which the amount is prescribed by or under any law; and

(*iv*) salaries and pensions of persons appointed by or with the approval of His Majesty or by the Secretary of State in Council; and

(*v*) salaries of judges of the High Court of the province and of the Advocate-General.

If any question arises whether any proposed appropriation of moneys does or does not relate to the above heads of expenditure, the decision of the Governor shall be final.

(4) Where any Bill has been introduced or is proposed to be introduced, or any amendment to a Bill is moved or proposed to be moved, the Governor may certify that the Bill or any clause of it or the amendment affects the safety or tranquillity of his province or any part of it or of another province, and may direct that no proceedings or no further proceedings shall be taken by the council in relation to the Bill, clause or amendment, and effect shall be given to any such direction.

(7) Subject to the rules and standing orders affecting the council, there shall be freedom of speech in the Governors' legislative councils. No person shall be liable to any proceedings in any Court by reason of his speech or vote in any such council or by reason of anything contained in any official report of the proceedings of any such council.

12. **Return and Reservation**:—(1) Where a Bill has been passed by a local legislative council the Governor, Lieutenant-Governor or Chief Commissioner may, instead of declaring that he assents to or withholds his assent from the Bill, return the Bill to the council for reconsideration, either in whole or in part, together with any amendments which he may recommend, or, in cases prescribed by rules under the principal Act may, and if the rules so require shall, reserve the Bill for the consideration of the Governor-General.

(2) Where a Bill is reseved for the consideration of the Governor-General, the following provisions shall apply:—

(*a*) The Governor, Lieutenant-Governor or Chief Commissioner may, at any time within six months from the date of the reservation of the Bill with the consent of the Governor-General, return the Bill for further consideration by the council with a recommendation that the council shall consider amendments thereto:

(*b*) After any Bill so returned has been further considered by the council, together with any recommendation made by the Governor, Lieutenant-Governor or Chief Commissioner relating thereto, the Bill, if re-affirmed with or without amendment, may be again presented to the Governor, Lieutenant-Governor, or Chief Commissioner.

(*c*) Any Bill reserved for the consideration of the Governor-General shall, if assented to by the Governor-General within a period of six months from the date of such reservation, become law on due publication of such assent, in the same way as a Bill assented to by the Governor, Lieutenant-Governor or Chief Commissioner but, if not assented to by the Governor-General within such period of six months, shall lapse and be of no effect unless before the expiration of that period either—

(*i*) the Bill has been returned by the Governor, Lieutenant-Governor or Chief Commissioner, for further consideration by the council; or

(*ii*) in the case of the council not being in session, a notification has been published of an intention so to return the Bill at the commencement of the next session.

(3) The Governor-General may (except where the Bill has been reserved for his consideration), instead of assenting to or withholding his assent from any Act passed by a local legislature, declare, that he reserves the Act for the signification of His Majesty's pleasure thereon, and in such case the Act shall not have validity until His Majesty in Council has signified his assent and his assent has been notified by the Governor-General.

13. **Emergency Powers**:—(1) Where a governor's legislative council has refused leave to introduce, or has failed to pass in a form recommended by the Governor, any Bill relating to a reserved subject the governor may certify that the passage of the Bill is essential for the discharge of his responsibility for the subject, and thereupon the Bill shall, notwithstanding that the council have not consented thereto, be deemed to have passed, and shall, on signature by the governor, become an Act of the local legislature in the form of the Bill as originally introduced or proposed to be introduced in the council or (as the case may be) in the form recommended to the council by the governor.

(2) Every such Act shall be expressed to be made by the governor, and the governor shall forthwith send an authentic copy thereof to the Governor-General, who shall reserve the Act for the signification of His Majesty's pleasure, and upon the signification of such assent by His Majesty in Council, and the notification thereof by the Governor-General, the Act have the same force and effect as an Act passed by the local legislature and duly assented to:

Provided that where, in the opinion of the Governor-General a state of emergency exists which justifies such action, he may, instead of reserving such Act, signify assent thereto, and thereupon the Act shall have such force and effect as aforesaid, subject however to disallowance by His Majesty in Council.

(3) An Act made under this section shall as soon as practicable after being made, be laid before each House of Parliament, and an Act which is required to be presented for His Majesty's assent shall not be so presented until copies thereof have been laid before each House of Parliament for not less than eight days on which that House has sat.

The Administration:—Each Local Government works through a Secretariat, which is divided into various departments, each under a Secretary. In addition to the Secretaries, there are special departmental heads such as the Inspectors General of Police, Jails, and Registration; the Director of Public Instruction, the Inspector-General of Civil Hospitals or Surgeon-General, the Sanitary Commissioner and the Superintendent of the Civil Veterinary Department. There are also Chief Engineers for Public Works and Irrigation, who are likewise Secretaries to Government. In nearly all the Provinces except Bombay, the revenue departments are administered, under Government, by a Board of Revenue.

The administrative system is based on the repeated sub-division of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important of these units is the District, and India embraces more than 250 Districts, with an average area of 4,430 square miles and an average population of 931,000. In Madras there is no local officer above the head of the District; elsewhere a Commissioner has the supervision of a Division comprising from four to six Districts. The head of a District is styled either the Collector and District Magistrate or the Deputy Commissioner. He is the representative of the Government and embodies the power of the State. He is concerned in the first place with the land and the land revenue. He has also charge of the local administration of the excise, income tax, stamp duty and other sources of revenue. As a Magistrate of the first class, he can imprison for two years and fine up to a thousand rupees. In practice he does not try many criminal cases, although he supervises the work of the other Magistrates in the District.

In addition to these two main departments the Collector is interested in all matters pertaining to the welfare of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of Public Works, Forests, Jails, Sanitation, and Education less direct than was formerly the case. But even in matters dealt with by separate departments, his active co-operation and direction in counsel are needed. The Municipal Government of all considerable towns is vested in Municipalities but it is the duty of the Collector to guide and control their working. He is usually the Chairman of the District Board which, with the aid of subsidiary boards, maintains roads, schools and dispensaries, and carries out sanitary improvements in rural areas.

Other important district officers are the Superintendent of Police, who is responsible for the discipline and working of the police force, and the Civil Surgeon, who (except in Bombay) is the head of the medical and sanitary administration. The local organisation of Government Public Works, Forests, Education and other special departments varies in different parts of the country. Each District has its own law officer, styled the Government Pleader.

The Districts are split up into sub-divisions, under Junior Officers of the Indian Civil Service or members of the Provincial Service called Deputy Collectors. In Madras, Bombay and the United Provinces there are smaller sub-district units called taluks or tahsils, administered by tahsildars (Bombay Mamlatdars), with naib tahsildars or mahalkarris. The tahsildar is assisted by subordinate officers, styled revenue inspectors or kanungos and the village officers. The most important of the latter are the headman who collects the revenue, the karnam, karkun or patwari who keeps the village accounts, and the chaukidar or village watchman.

INSTRUCTIONS TO GOVERNORS

Prior to the inauguration of the Reforms the following Instructions were issued to Governors under the Royal Sign Manual:—

Instructions to the Governor or acting Governor for the time being of the Presidency or Province of——:—Whereas by the Government of India Act provision has been made for the gradual development of self-governing institutions in British India with a view to the progressive realisation of Responsible Government in that country as an integral part of our Empire, and whereas it is our will and pleasure that in the execution of the office of the Governor in and over the Presidency or the Province of ———you shall further the purposes of the said Act to the end that the institutions and methods of Government therein provided shall be laid upon the best and surest foundations, that the people of the said Presidency or Province shall acquire such habits of political action and respect such conventions as will best and soonest fit them for self-government, and that our authority and the authority of the Governor-General in Council shall be duly maintained. Now, therefore, we do hereby direct and enjoin you and declare our will and pleasure to be as follows —

1. You shall do all that lies in your power to maintain those standards of good administration, to encourage religious toleration, co-operation and good will among all classes and creeds, to ensure the probity of public finance and the solvency of the Presidency or Province, and to promote all measures making for the moral, social and industrial welfare of the people and tending to fit all classes of the population without distinction to take their due share in the public life and government of the country.

2. You shall bear in mind that it is necessary and expedient that those now and hereafter to be enfranchised shall appreciate the duties, responsibilities and advantages which spring from the privilege of enfranchisement, that is to say, that those who exercise the power, henceforward entrusted to them, of returning representatives to the Legislative Council being enabled to perceive the effects of their choice of a representative, and that those who are returned to the Council, being enabled to perceive the effects of their votes given therein, shall come to look for the redress of their grievances and the improvement of their condition to the working of representative institutions.

3. DUTY OF THE MINISTERS:—Inasmuch as certain matters have been reserved for the administration according to law of the Governor in Council, in respect of which the authority of our Governor-General in Council shall remain unimpaired, while certain other matters have been transferred to the administration of the Governor acting with a Minister. it will be for you so to regulate the business of the government of the Presidency or Province that so far as may be possible the responsibility for each of these respective classes of matters may be kept clear and distinct.

4. Nevertheless, you shall encourage the habit of joint deliberation between yourself, your councillors and your ministers in order that the experience of your official advisers may be at the disposal of your ministers, and that the knowledge of your ministers as to the wishes of people may be at the disposal of your councillors.

5. You should assist ministers by all the means in your power in the administration of the transferred subjects and advise them in regard to their relations with the Legislative Council.

6. In considering a minister's advice and deciding whether or not there is sufficient cause in any case to dissent from his opinion, you shall have due regard to his relations with the Legislative Council and to the wishes of the people of the Presidency or Province, as expressed by their representatives therein.

SPECIAL CHANGES:—But in addition to the general responsibilities with which you are, whether by statute or under this instrument, charged we do further hereby specially require and charge you:—

(1) To see that whatsoever measures in your opinion necessary for maintaining safety and tranquillity in all parts of your Presidency or Province and for preventing occasions of religious or racial conflict are duly taken and that all orders issued by our Secretary of State or by our Governor-General in Council on our behalf, to whatever matters relating, are duly complied with.

(2) To take care that due provision shall be made for the advancement and social welfare of those classes amongst the people committed to your charge, who whether on account of the smallness of their number or their lack of educational or material advantages or from any other cause, specially rely upon our protection and cannot as yet fully rely for their welfare upon joint political action, and that such classes shall not suffer or have cause to fear neglect or oppression.

(3) To see that no order of your Government and no act of your Legislative Council shall be so framed that any one of the diverse interests of, or arising from, race, religion, education, social condition, wealth or any other circumstance may receive unfair advantage or may unfairly be deprived of privileges or advantages which they have heretofore enjoyed, or be excluded from the enjoyment of benefits which may hereafter be conferred on the people at large.

(4) To safeguard all members of our services employed in the said Presidency or Province in the legitimate exercise of their functions and in the enjoyment of all recognised rights and privileges, and to see that your Government order all things justly and reasonably in their regard and that due obedience is paid to all just and reasonable orders and diligence shown in their execution.

(5) To take care that while the people inhabiting the said Presidency or Province shall enjoy all facilities for the development of commercial and industrial undertakings, no monopoly or special privilege which is against the common interests shall be established; and no unfair discrimination shall be made in matters affecting commercial or industrial interests.

Instruction to the Governor-General.

The instructions to the Governor-General were not made public while Lord Chelmsford held office, but after Lord Reading had succeeded him the following revised Instrument of Instructions was published in June 1921:—

Instructions to Our Governor-General of India given at Our Court at Buckingham Palace this 15th day of March 1921.

Whereas by the Government of India Act it is enacted that the Governor-General of India is appointed by Warrant under Our Royal Sign Manual, and We have by Warrant constituted and appointed a Governor-General to exercise the said office subject to such instructions and directions as he, or Our Governor-General for the time being, shall from time to time receive or have received under Our Royal Sign Manual or under the hand of one of Our Principal Secretaries of State;

And whereas certain instructions were issued under Our Royal Sign Manual to Our said Governor-General bearing date the nineteenth day of November 1918:

And whereas by the coming into operation of the Government of India Act, 1919, it has become necessary to revoke the said Instructions and to make further and other provisions in their stead;

Now, therefore, We do by these Our instructions under Our Royal Sign Manual hereby revoke the aforesaid instructions and declare Our pleasure to be as follows:—

I. Our Governor-General for the time being (thereinafter called Our said Governor-General) shall with all due solemnity cause our Warrant under Our Royal Sign Manual appointing him to be read and published in the presence of the Chief Justice for the time being or, in his absence, of the Senior Judge of one of the High Courts established in British India, and of so many of the Members of the Executive Council of Our said Governor-General as may conveniently be assembled.

Our said Governor-General shall take the Oath of Allegiance and the Oath for the due execution of the Office of Our Governor-General of India, and for the due and impartial administration of Justice in the forms hereto appended; which Oaths the said Chief Justice for the time being or, in his absence, the Senior Judge of one of Our said High Courts shall, and he is hereby required to, tender and administer unto him.

II. And We do authorise and require Our said Governor-General from time to time by himself or by any other person to be authorised by him in that behalf, to administer to every person who shall be appointed by Us by Warrant

under Our Royal Sign Manual to be a Governor of one of Our presidencies or provinces in India, and to every person who shall be appointed to be a Lieutenant-Governor or a Chief Commissioner, the Oaths of Allegiance and of Office in the said forms.

III. And We do authorise and require Our said Governor-General from time to time, by himself or by any other person to be authorised by him in that behalf, to administer to every person who shall be appointed by Us by Warrant under Our Royal Sign Manual or by the Secretary of State in Council of India to be a Member of the Governor-General's Executive Council or a Member of a Governor's Executive Council, and to every person who shall be appointed to be a Member of a Lieutenant-Governor's Executive Council, and to every person whom any of Our said Governors shall appoint to be a Minister, the Oaths of Allegiance and of Office in the said forms together with the Oath of Secrecy hereto appended.

IV. And We do further direct that every person who under these instructions shall be required to take an Oath, may make an affirmation in place of an Oath if he has any objection to making an Oath.

V. And We do hereby authorise and empower Our said Governor-General in Our name and on Our behalf to grant to any offender convicted in the exercise of its criminal jurisdiction by any Court of Justice within Our said Territories a pardon either free or subject to such lawful conditions as to him may seem fit.

VI. And inasmuch as the policy of Our Parliament is set forth in the Preamble to the said Government of India Act, 1919, We do hereby require Our said Governor-General to be vigilant that this policy is constantly furthered alike by his Government and by the local Governments of all Our presidencies and provinces.

VII. In particular it is Our will and pleasure that the powers of superintendence, direction and control over the said local Governments vested in Our said Governor-General and in Our Governor-General in Council shall, unless grave reason to the contrary appears, be exercised with a view to furthering the policy of the local Governments of all Our Governors' provinces, when such policy finds favour with a majority of the Members of the Legislative Council of the province.

VIII. Similarly, it is Our will and pleasure that Our said Governor-General shall use all endeavour consistent with the fulfilment of his responsibilities to Us and to Our Parliament for the welfare of Our Indian subjects, that the administration of the matters committed to the direct charge of Our Governor-General in Council may be conducted in harmony with the wishes of Our said subjects as expressed by their representatives in the Indian Legislature, so far as the same shall appear to him to be just and reasonable.

IX. For above all things it is Our will and pleasure that the plans laid by Our Parliament for the progressive realisation of responsible government in British India as an integral part of Our Empire may come to fruition, to the end that British India may attain its due place among Our Dominions. Therefore We do charge Our said Governor-General by the means aforesaid and by all other means which may to him seem fit to guide the course of Our subjects in India whose governance We have committed to his charge so that, subject on the one hand always to the determination of Our Parliament, and, on the other hand, to the co-operation of those on whom new opportunities of service have been conferred, progress toward, such realisation may ever advance to the benefit of all Our subjects in India.

X. And We do hereby charge Our said Governor-General to communicate these Our Instructions to the Members of his Executive Council, and to publish the same in such manner as he may think fit.

Administrative Divisions.

Provinces.	No. of Districts.	Area in Square miles.	Population (1911).
Ajmer Merwara	2	2,711	501,395
Andamans and Nicobars	....	3,143	26,459
Assam	12	52,959	6,713,635
Baluchistan	6	45,804	414,412
Bengal	28	78,412	45,483,077
Bihar and Orissa	21	83,205	34,490,084
Bombay (Presidency)	26	123,064	19,672,642
Bombay	26	75,918	16,113,042
Sind	6	47,066	3,513,435
Aden	....	80	46,165
Burma	41	236,738	12,115,217
Central Provinces and Berar	22	100,345	13,916,308
Coorg	1	1,582	174,976
Madras	24	141,726	41,405,404
North-West Frontier Province (Districts and administered Territories)	5	16,466	2,196,933
Punjab	29	97,209	19,974,956
United Provinces of Agra & Oudh	48	107,164	47,182,044
Agra	36	83,198	34,624,040
Oudh	12	23,966	12,558,004
Total British Territory	267	1,097,901	244,267,542

States and Agencies.	No. of Districts.	Area in Square miles.	Population (1911).
Baluchistan States	....	86,511	396,432
Baroda State	....	8,099	2,032,798
Bengal States	....	32,773	4,538,161
Bombay States	....	65,761	7,411,567
Central India Agency	....	78,772	9,356,980
Central Provinces States	....	31,188	2,117,002
Eastern Bengal and Assam States	....	....	575,835
Hyderabad State	....	82,698	13,374,676
Kashmir State	....	80,900	3,158,126
Madras States	....	9,969	4,811,841
Cochin State	....	....	918,110
Travancore State	....	....	3,428,975
Mysore State	....	29,444	5,806,193
North-West Frontier Province (Agencies and Tribal areas).	....	....	1,622,094
Punjab States	....	36,532	4,212,794
Rajputana Agency	....	127,541	10,530,432
Sikkim	....	....	87,920
United Provinces States	....	5,079	832,036
Total Native States	....	675,267	70,864,995
Grand Total, India	....	1,773,168	315,132,537

For new provisional total, see The Census of 1921.

The Bombay Presidency.

The Bombay Presidency stretches along the west coast of India, from Sind in the North to Kanara in the South. It embraces, with its feudatories and Aden, an area of 186,923 square miles and a population of 27,084,317. Of this total 62,988 square miles are in Native States, with a population of 7,444,549. Geographically included in the Presidency but under the Government of India is the first class Native State of Baroda, with an area of 8,182 square miles and a population of 2,032,798.

The Presidency embraces a wide diversity of soil, climate and people. In the Presidency Proper are the rich plains of Gujarat, watered by the Nerbudda and the Tapti, whose fertility is so marked that it has long been known as the Garden of India. South of Bombay City the province is divided into two sections by the Western Ghats, a range of hills running parallel to the coast. Above Ghats are the Deccan Districts, with a poor soil and an arid climate, south of these come the Karnatic districts. On the sea side of the Ghats is the Konkan, a rice-growing tract, intercepted by creeks which make communication difficult. Then in the far north is Sind, totally different from the Presidency Proper, a land of wide and monotonous desert except where irrigation from the Indus has brought abounding fertility.

The People.

The population varies as markedly as soil and climate. In Sind Mahomedans predominate. Gujarat has remained true to Hinduism although long under the dominion of powerful Mahomedan kings. Here there is an amplitude of caste divisions, and a people, who although softened by prosperity, are amongst the keenest trading races in the world. The Deccan peasant has been seasoned by adversity; the saying goes that the Deccan expects a famine one year in every three, and gets it; the population is much more homogeneous than in Gujarat, and thirty per cent. are Mahrattas. The Karnatic is the land of the Lingayets, a Hindu reforming sect of the twelfth century, and in the Konkan there is a large proportion of Christians. Four main languages are spoken, Sindi, Gujarati, Marathi and Kanarese, with Urdu a rough *lingua franca* where English has not penetrated. The main castes and tribes number five hundred.

Industries.

The principal industry is agriculture, which supports sixty-four per cent. of the population. In Sind the soils are wholly alluvial, and under the influence of irrigation produce yearly increasing crops of wheat and cotton. In Gujarat they are of two classes, the black cotton soil, which yields the famous Broach cottons, the finest in India, and alluvial, which under careful cultivation in Ahmedabad and Kaira makes splendid garden land. The dominant soil characteristic of the Deccan is black soil, which produces cotton, wheat, gram and millet, and in certain tracts rich crops of sugarcane. The Konkan is a rice land, grown under the abundant rains of the submontane regions, and in the south the Dharwar cotton vies with Broach as the best in India. There are no great perennial rivers suitable for irrigation, and the harvest is largely dependent upon the seasonal rainfall, supplemented by well irrigation. A chain of irrigation works, consisting of canals fed from great reservoirs in the region of unfailing rainfall in the Ghats, is gradually being completed, and this will ultimately make the Deccan immune to serious drought. More than any other part of India the Presidency has been scourged by famine and plague during the past twenty years. The evils have not been unmixed, for tribulation has made the people more self-reliant, and the rise in the values of all produce, synchronising with a certain development of industry, has induced a considerable rise in the standard of living. The land is held on what is known as the ryotwari tenure, that is to say, each cultivator holds his land direct from Government under a moderate assessment, and as long as he pays this assessment he cannot be dispossessed.

Manufactures.

Whilst agriculture is the principal industry, others have no inconsiderable place. The mineral wealth of the Presidency is small and is confined to building stone, salt extracted from the sea, and a little manganese. But the handicrafts are widely distributed. The handloom weavers produce bright-coloured saris, and to a diminishing extent the exquisite kincobs of Ahmedabad and Surat. Bombay silver ware has a place of its own, as well as the brass work of Poona and Nasik. But the tendency is to submerge the indigenous handicrafts beneath industry organised on modern lines. Bombay is the great centre in India of the textile trade. This is chiefly found in the headquarter city, Bombay.

Number of Looms in Bombay Island.	60,634
Number of Spindles in Bombay Island.	2,964,526
Number of hands employed in the Textile Industry in Bombay Island.	140,208
Consumption of Cotton by the Mills in Bombay Island .. .. Cwts.	3,350,025
Number of Spindles in Ahmedabad.	1,039,996
Number of Looms in Ahmedabad ..	22,718
Number of Spindles in Sholapore ..	2 44,240
Number of Looms in Sholapore ..	4,339
Number of Spindles in the Bombay Presidency (excluding Bombay Island)	1,809,713
Number of Looms in the Bombay Presidency (excluding Bombay Island)..	34,982

Great impetus has been given to Bombay industries by the provision of electric power generated fifty miles away on the Ghats, and the year 1919 witnessed a phenomenal flotation of new industrial companies of almost every description.

The situation of Bombay on the western sea-board in touch at once with the principal markets of India and the markets of the west has given Bombay an immense sea-borne trade. The older ports, Surat, Broach, Cambay and Mandvie, were famous in the ancient days, and their bold and hardy mariners carried Indian commerce to the Persian Gulf and the coasts of Africa. But the opening of the Suez Canal and the increasing size of ocean steamers have tended to concen

trate it in modern ports with deep water anchorages, and the sea-borne trade of the Presidency is now concentrated at Bombay and Karachi, although attempts are being made to develop Mormugao, in Portuguese territory, into an outlet for the trade of the Southern Mahratta Country.

Administration.

The Presidency is administered by a Governor and an Executive Council of four members, with the assistance of three Ministers. The exact change made in the functions of the Provincial Governments is indicated in the section on the Provincial Governments (*q. v.*) where a description is given of the division of the administration into two branches, the Reserved Subjects, administered by the Governor and his Council and the Transferred Subjects, administered by the Governor and his Ministers, the whole Government commonly meeting and acting as one. In another part of that section the division between Reserved and Transferred subjects is shown. This new form of administration under the Reform Act of 1919 came into operation in January 1921. All papers relating to public service business reach Government through the Secretariat, divided into six main departments each under a Secretary (*a*) Revenue and Financial: (*b*) Political, Judicial and Special: (*c*) General, Educational, Marine and Ecclesiastical: (*d*) Ordinary Public Works: (*e*) Irrigation: (*f*) Home. The senior of the Civilian Secretaries is entitled the Chief Secretary. The Government frequently moves. It is in Bombay from November to the end of March; at Mahableshwar from April to June; in Poona from June to September; and at Mahableshwar from October to November; but the Secretariat is always in Bombay. Under the Governor-in-Council the Presidency is administered by four Commissioners. The Commissioner in Sind has considerable independent powers. In the Presidency Proper there are Commissioners for the Northern Division, with headquarters at Ahmedabad; the Central Division at Poona; and the Southern Division at Belgaum. Each district is under a Collector, usually a Covenanted Civilian, who has under him one or more Civilians as Assistant Collectors, and one or more Deputy Collectors. A collectorate contains on an average from eight to ten talukas, each consisting of from one to two hundred villages whose whole revenues belong to the State. The village officers are the patel, who is the head of the village both for revenue and police purpose; the talati or kulkarni, clerk and accountant; the messenger and the watchman. Over each Taluka or group of village is the mamlatdar, who is also a subordinate magistrate. The charge of the Assistant Deputy Collector contains three or four talukas. The Collector and Magistrate is over the whole District. The Commissioners exercise general control over the Districts in their Divisions. The control of the Government over the Native States of the Presidency is exercised through Political Agents.

Justice.

The administration of justice is entrusted to the High Court sitting in Bombay, and comprising a Chief Justice, who is a barrister, and six puisne judges, either Civilians, Barristers, or Indian lawyers. In Sind the Court of the Judicial Commissioner (three judges, one of whom must be a barrister) is the highest court of civil and criminal appeal. Of the lower civil courts the court of the first instance is that of the Subordinate Judge recruited from the ranks of the local lawyers. The Court of first appeal is that of the District or Assistant Judge, or of a first class subordinate judge with special powers. District and Assistant Judges are Indian Civilians, or members of the Provincial Service. In cases exceeding Rs. 5,000 in value an appeal from the decision of the Subordinate or Assistant Judge and from the decision of the District Judge in all original suits lies to the High Court. District and Assistant Judges exercise criminal jurisdiction throughout the Presidency, but original criminal work is chiefly disposed of by the Executive District Officers. Capital sentences are subject to confirmation by the High Court. In some of the principal cities Special Magistrates exercise summary jurisdiction (Bombay has four Presidency Magistrates, as well as Honorary Magistrates exercising the functions of English Justices of the Peace) and a Court of Small Causes, corresponding to the English Country Courts.

Local Government.

Local control over certain branches of the administration is secured by the constitution of local boards and municipalities, the former exercising authority over a District or a Taluka, and the latter over a city or town. These bodies are composed of members either nominated by Government or elected by the people, who are empowered to expend the funds at their disposal on education, sanitation, the construction of roads and tanks, and general improvements. Their funds are derived from cesses on the land revenue, the toll and ferry funds. The tendency of recent years has been to increase the elective and reduce the nominated element, to allow these bodies to elect their own chairmen, whilst large grants have been made from the general revenues for water supply and drainage.

Finance.

The finance of the provincial governments is marked by definite steps toward provincial financial autonomy. Up to 1870 there was one common purse for all India. Since then progressive steps have been taken to increase the independence of local Governments. Broadly, certain heads of revenue are divided with the Imperial Government, whilst certain growing heads of revenue, varying in each province, are allotted to the local Government. Thus in Bombay the land revenue, stamp revenue and revenue from assessed taxes are divided with the Government of India. All other local sources of revenue go intact to the local Government. The provincial Budget for 1921-22 shows an opening balance of Rs. 2,78 lakhs, revenue Rs. 15,40 lakhs, expenditure Rs. 16,42 lakhs.

Public Works.

The Public Works Department is under the control of two Chief Engineers who act as Secretaries to the Government; one for General Works and the other for Irrigation.

Under them are Superintending Engineers in charge of divisions and Executive Engineers in charge of districts, with the Consulting Architect. The chief irrigation works are in Sind and consist of a chain of canals fed by the annual inundations from the Indus and one perennial canal the Jamrao. In the Presidency proper the principal protective works are the Nera Canal, Gokak Canal, Mutha Canal and the Godavari Canal Scheme. In addition there is under construction a chain of protective irrigation works, originating in reservoirs in the Ghat regions. The Godavari canals were completed during the year 1917-18, the Pravara canals are approaching completion and the works in connection with the Nira Right Bank canal are making good progress.

Police.

The Police Force is divided into three categories: District Police, Railway Police and the Bombay City Police. The District Police are under the Inspector-General who is either a member of the Gazetted Force or a Covenanted Civilian. Under him are the Deputy Inspector-Generals for Sind and the Northern and Southern Ranges of the Presidency proper, for Railways and for Criminal Investigation. District Superintendents of Police have charge of each District with a regular cadre comprising Assistant Superintendents, Sub-Inspectors, Chief Constables and Constables. The Bombay City Police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Training School at Nasik prepares young gazetted officers and the rank and file for their duties. The cost of the Police is 165 lakhs.

Education.

Education is imparted partly through direct Government agency, partly through the medium of grants-in-aid. Government maintain Arts Colleges at Bombay, Poona and Gujarat; the Grant Medical College, the Poona College of Science, the Agricultural College, Veterinary College, School of Art, Law School and a College of Commerce. A Science College in Bombay is now in course of construction. Also in Bombay City, and the headquarters of each district, a model secondary school. The other secondary schools are in private hands; the majority of the primary schools are maintained by District and Local Boards with a grant-in-aid. The Bombay Municipality is responsible for primary education in Bombay City. There are now in the Presidency 10 Arts Colleges, 5,197 Scholars; 140 boys' High Schools; 44 girls' High Schools; 315 boys' middle schools; 41 girls' middle schools. The total number of pupils attending Secondary Schools is 82,373, of whom 10,117 are girls; 12,714 primary schools attended by 602,157 boys and 157,965 girls. Total expenditure on education is 235 lakhs.

The Educational Department is administered by a Director, with an Inspector in each Division and a Deputy Inspector with Assistants in each district. Higher education is controlled by the Bombay University (established in 1857) consisting of the Chancellor (the Governor of the Presidency), the Vice-Chancellor (appointed by Government for two years), and 110 Fellows of whom 10 are *ex-officio*; 10 elected by the Graduates, 10 by the Faculties; and 80 are nominated by the Chancellor.

The principal educational institutions are:—

Government Arts Colleges—

Elphinstone College, Bombay, Principal, Mr. Covernton.

Deccan College, Poona, Principal, Mr. H. G. D. Turnbull.

Gujarat College, Ahmedabad, Principal, the Rev. W. G. Robertson.

Dharwar College, Principal, Mr. H. G. Rawlinson.

Private Arts Colleges—

St. Xaviers, Bombay (Society of Jesus), Principal, Rev. Father Blatter.

Wilson College, Bombay (Scottish Mission), Principal, Rev. J. Mackenzie.

Ferguson College, Poona (Deccan Educational Society), Principal, Mr. Kanitkar.

Baroda College, Baroda (Baroda State), Principal, Mr. Masani.

Samaldas College, Bhavnagar (Bhavnagar State), Principal, Mr. Unwalla.

Bahauddinbhai College, Junagadh State, Principal, Mr. Scott.

Special Colleges—

Grant Medical College, Bombay (Government), Principal, Lt.-Col. Carter.

College of Science, Poona (Government) Principal, Dr. Allen.

Agricultural College, Poona (Government), Principal, Dr. Harold Mann.

Chiefs' College, Rajkot, Principal, Mr. C. Mayne.

College of Science, Ahmedabad.

Law School, Bombay, Principal, Mirza Ali Akbar Khan.

College of Commerce, Bombay, Principal, Mr. M. J. Antia.

Veterinary College, Bombay, Mr. K. Hewlett.

Bombay Bacteriological Laboratory, Director Lt.-Col. Glen Liston, C.I.E., I.M.S.

Sir J. J. School of Art, Bombay (Government), Principal, Mr. W. E. G. Solomon.

Victoria Technical Institute, Bombay.

Medical.

The Medical Department is in charge of the Surgeon-General and Sanitation of the Sanitary Commissioner, both members of the Indian Medical Service. Civil Surgeons stationed at each district headquarters are responsible for the medical work of the district, whilst sanitation is entrusted to one of the Deputy Sanitary Commissioners. Three large hospitals are maintained by the Government in Bombay, and well-equipped hospitals exist in all important up-country stations. Over four million persons including 67,000 in-patients are treated annually. The Presidency contains 7 Lunatic Asylums and 16 institutions for the treatment of Lepers. Vaccination is

carried out by a staff under the direction of the Sanitary Commissioner. Sanitary work has received an immense stimulus from the large grants made by the Government of India out of the opium surpluses. The expenditure on medical relief is 35 lakhs and on sanitation 2 lakhs.

Governor and President in Council.

His Excellency The Right Hon'ble Sir George Ambrose Lloyd, G.C.I.E., D.S.O. Took his seat 17th December 1918.

Personal Staff.

Private Secy.—C. G. Adam, I.C.S.

Mily. Secretary—Major R. L. Benson, D. S. O., M. C.

Surgeon.—Lt.-Col. G. J. Grafton-Young, I.M.S.

Aides-de-Camp.—Captain C. Brooke-Short, Capt. G. S. Rawstorne, 2nd Bn., Seaforth Highlanders, Lt. The Hon. J. H. P. Verney, M. C., Capt. C. J. Brigg, 8th Cavalry (on leave), Lt. J. H. Carmichael, 1st Bn., Argyle and Sutherland Highlanders.

Honorary Aides-de-Camp.—Captain A. K. MacEwan, O. B. E.; Mr. C. N. Moberley, C.I.E., Stephen Calvocoressi; Meherban Sir Parashramrav Ramchandrarav Alis Bhausaheb Patwardhan, K.C.I.E., Chief of Jamkhandi; Meherban Abdul Majid Khan Diller Jang Bahadur, Nawab of Savanur; Thakor Saheb Bahadursinhji Mansinhji of Palitana; Kumar Shri Shivaisinhji of Jamnagar; Shaikh Abdul Khaliq of Mangrol.

Commandant H. E. the Governor's Bodyguard.—Capt. J. Nethersole, M.C., 25th Cavalry.

Indian Aide-de-Camp—Subadar Major Balkrishna Rao Sardar Bahadur, 110th Mahrattas.

Members of Council and Ministers.

Finance Member.—The Hon. Mr. G. S. Lawrence, C.S.I.

Revenue Member.—The Hon. Sir Ibrahim Rahimtulla.

Home Member.—The Hon. Mr. M. H. W. Hayward.

General Member.—The Hon. Sir Chimanlal Setalvad.

Minister of Education.—The Hon. Mr. R. P. Paranjpye.

Minister of Local Self-Government.—The Hon. Shaik Ghulam Husain Hidayatallah.

Minister of Forests and Excise.—The Hon. Mr. C. V. Mehta.

The Educational portfolio includes, among other subjects, Medical Administration, Public Health, Sanitation and Industrial Development. The Minister of Local, Self-Government also deals with Public Works (roads and buildings) and the Civil Veterinary Department; while Agriculture, Co-operative Societies, Registration and some other matters are in charge of the Minister of Forests and Excise.

SECRETARIES TO GOVERNMENT.

Chief Secretary, Financial Department.—P. J. Mead, C.S.I., C.I.E.

Home Department.—James Crerar, C.I.E., I.C.S

Secretary, Judicial and Political Departments—A. Montgomerie, I.C.S.

Revenue—C. M. Baker, B.A., C.I.E.

General, Educational, Marine and Ecclesiastical—J. C. Ker, M.A., I.C.S.

Legal Department and Remembrancer of Legal Affairs.—A. C. Wild, B.A., I.C.S.

Public Works Department.—Lt.-Colonel E. M. Procs, *Chief Engineer and Secretary.*

MISCELLANEOUS APPOINTMENTS.

Advocate-General, The Hon. Sir. T.J. Strangman.

Inspector-General of Police, F. C. Griffith, O.B.E.

Director of Public Instruction, The Hon. Mr. J. G. Covernton, C.I.E.

Surgeon-General, The Hon. Major-General W. E. Jennings, M.D., I.M.S.

Oriental Translator, Shaikh Yakub Vazir Muhammad, M.B E.

Chief Conservator of Forests, W. E. Copleston.

Talukadari Settlement Officer, G. E. Chatfield, C.I.E., I.C.S.

Settlement Commissioner and Director of Land Records, F. G. H. Anderson.

Director of Agriculture and Co-operative Societies, G. F. Keatinge, C.I.E.

Registrar of Co-operative Societies, Otto Rothfeld.

Municipal Commissioner, Bombay, H. B. Clayton, I.C.S.

Sheriff, Mr. Mahomedbhai Currimbhoy.

Vice-Chancellor, Bombay University, Sir Chimanlal H. Setalvad.

Registrar, Bombay University, Fardunji Dastur.

Commissioner of Police, Bombay, W. C. Holman.

Sanitary Commissioner, Lieut.-Col. William O'Sullivan Murphy, M.P., I.M.S.

Accountant-General (Acting), J. S. Milne.

Inspector-General of Prisons, Lt.-Col. F. O. N. Mell, C.I.E., I.M.S.

Postmaster-General, H. A. Sams, C.I.E , I.C.S.

Commissioner of Customs, Salt, Opium and Excise, W. C. Shepherd, B.A , I.C S.

Collector of Customs, Bombay, G. S. Hardy, I.C.S.

Consulting Architect to Government, Samuel Woods Hill, A R.L., B.A.

Consulting Surveyor to Government, Arthur Edward Mirams, F.S.I., F.S.A., F.R.S.I.

Registrar of Companies, Capt. H. C. B. Mitchell.

Director of Development, Sir Lawless Hepper, KT., R.E.

Director, Labour Office, G. Findlay Shirras, M.A.

Director, Bureau of Information, G. F. Gennings.

GOVERNORS OF BOMBAY.

Sir Abraham Shipman	1662
Died on the island of Anjediva in Oct.	1664
Humfrey Cooke	1665
Sir Gervase Lucas	1666
Died, 21st May, 1667.	
Captain Henry Garey (*Officiating*) ..	1667
Sir George Oxenden	1668
Died in Surat, 14th July, 1669.	

Gerald Aungier	1669
Died in Surat, 30th June, 1677.	
Thomas Rolt	1677
Sir John Child, Bart.	1681
Bartholomew Harris	1690
Died in Surat, 10th May, 1694.	
Daniel Annesley (*Officiating*)	1694
Sir John Gayer	1694
Sir Nicholas Waite	1704
William Aislabie	1708
Stephen Strutt (*Officiating*)	1715
Charles Boone	1715
William Phipps	1722
Robert Cowan	1729
Dismissed.	
John Horne	1734
Stephen Law	1739
John Geekie (*Officiating*)	1742
William Wake	1742
Richard Bourchier	1750
Charles Crommelin	1760
Thomas Hodges	1767
Died, 23rd February, 1771.	
William Hornby	1771
Rawson Hart Boddam	1784
Rawson Hart Boddam	1785
Andrew Ramsay (*Officiating*)	1788
Major-General William Medows	1788
Major-General Sir Robert Abercromby, K.C.B. (*a*).	1790
George Dick (*Officiating*)	1792
John Griffith (*Officiating*)	1795
Jonathan Duncan	1795
Died, 11th August, 1811.	
George Brown (*Officiating*)	1811
Sir Evan Nepean, Bart.	1812
The Hon. Mountstuart Elphinstone	1819
Major-General Sir John Malcolm, G.C.B.	1827
Lieut.-General Sir Thomas Sidney Beckwith, K.C.B.	1830
Died, 15th January, 1831.	
John Romer (*Officiating*)	1831
The Earl of Clare	1831
Sir Robert Grant, G.C.H.	1835
Died, 9th July, 1838.	
James Farish (*Officiating*)	1838
Sir J. Rivett-Carnac, Bart.	1839
Sir William Hay Macnaghten, Bart. (*b*)	
George William Anderson (*Officiating*)	1841
Sir George Arthur, Bart., K.C.H.	1842
Lestock Robert Reid (*Officiating*)	1846
George Russell Clerk	1847
Viscount Falkland	1848
Lord Elphinstone, G.C.H., P.C.	1853
Sir George Russell Clerk, K.C.B. (2nd time)	1860
Sir Henry Bartle Edward Frere, K.C.B.	1862
The Right Hon. William Robert Seymour Vesey FitzGerald.	1867
Sir Philip Edmond Wodehouse, K.C.B.	1872
Sir Richard Temple, Bart., K.C.S.I.	1877
Lionel Robert Ashburner, C.S.I. (*Acting*)	1880
The Right Hon. Sir James Fergusson, Bart., K.C.M.G.	1880
James Braithwaite Peile, C.S.I. (*Acting*)	1885
Baron Reay	1885
Baron Harris	1890
Herbert Mills Birdwood, C.S.I. (*Acting*)	1890
Baron Sandhurst	1890
Baron Northcote, C.B.	1900
Sir James Monteath, K.C.S.I. (*Acting*)	1903
Baron Lamington, G.C.M.G., G.C.I.E.	1903
J. W. P. Muir-Mackenzie, C.S.I. (*Acting*)	1907
Sir George Sydenham Clarke, G.C.M.G., G.C.J.E. (*c*).	1907
Baron Willingdon, G.C.I.E.	1913
Sir George Ambrose Lloyd, G.C.I.E., D.S.O.	1918

(*a*) Proceeded to Madras on duty in Aug., 1793, and then joined the Council of the Governor-General as Commander-in-Chief in India on the 28th Oct., 1793.

(*b*) Was appointed Governor of Bombay by the Honourable the Court of Directors on the 4th Aug., 1841, but, before he could take charge of his appointment, he was assassinated in Cabul on the 23rd Dec., 1841.

(*c*) Afterwards (by creation) Baron Sydenham

BOMBAY LEGISLATIVE COUNCIL.

PRESIDENT.

The Hon'ble Sir Narayan Ganesh Chandavarkar, KT, B.A., LL.B.

DEPUTY PRESIDENT.

Rao Saheb Harilal Desaibhai Desai, B.A., LL.B.

ELECTED MEMBERS.

Mr. Anandrao Narayen Surve (Maratha).
Dr. Shiavaksh Sorabji Batliwala.
Mr. Sitaram Keshav Bole.
Mr. Naoroji Manekji Dumasia.
Dr. Cajeetan Fernandes, M.D., F.C.P.S., L.M.S.
Dr. Kavasji Edulji Dadachanji.

Mr. Wadhumal Oodharam.
Rao Saheb Harilal Desaibhai Desai, B.A., LL.B.
Mr. Chunilal Maneklal Gandhi, B.A., LL.B.
Mr. Rewansidda Gawrappa Salger.
Mr. Vasudeo Rajaram Gupte, B.A., LL.B.
Rao Bahadur Ramanbhai Mahipatram Nilkanth, B.A., LL.B.
Mr. Bhulabhai Pragjibhai Patel.
Mr. Antoldas Hargovandas Vakil, B.A., LL.B.
Mr. Jesangbhai Bhaibabhai Patel.
Rao Saheb Dadubhai Purushotamdas Desai.
Mr. Dinshaji Bamanji Dalal.
Mr. Lalbhai Ambaram.
Mr. Tehmuras Kavasji Modi, B.A., LL.B., Bar.-at-Law.
Mr. Girjashankar Bhagvanji Trivedi.
Mr. Moreshwar Vishvanath Pradhan, B.A., LL.B.
Shrimant Jagdeorao Anandrao Powar.
Rao Bahadur Ganesh Krishna Chitale.
Mr. Anandrao Shripatrao Deshmukh.
Rao Saheb Rupchand Motiram.
Mr. Dattatraya Govind Juvekar, B.A., LL.B.
Mr. Kirtirao Bhimrao Nimbalkar (Maratha).
Mr. Hiraman Narayan Shindore.
Mr. Gangaji Mukundarao Kalbhor.
Dewan Bahadur Kashinath Ramchandra Godbole, M.C.E.
Mr. Pandurang Narayan Adhav.
Rao Bahadur Raoji Ramchandra Kale.
Khan Bahadur Dhanjisha Bomanji Cooper.
Mr. Pandit Rayapa Chikodi.
Mr. Annappa Phadappa Chaugule.
Rao Saheb Phakirappa Gurubasappa Halkatti.
Mr. Shiddappa Totappa Kambli, B.A., LL.B.
Mr. Channappa Chanvirappa Hulkotti, B.A., LL.B.
Mr. Shankar Balkrishna Dubashe.
Mr. Dajirav Amritrav Vichare (Maratha).
Rao Saheb Lakshman Vishnu Parulekar.
Mukhi Jethanand Pritamdas.
Mr. Bhojsing Grudinomal Pahalajani, B.A., B.SC.
Mr. Shamrao Pandurang Ligade.
Mr. Gopal Chimnaji Bhate.
Rao Bahadur Siddhaath Dhonddev Garud.
Mr. Ibrahim Suleman Haji, B.A., B.SC. (ECON.) (Lond.), F.R.E.S., Bar. at-Law.
Mr. Mahomed Hussein Abdulali Havcliwalla, Bar.-at- Law.
Mr. Ghulam Hussein Kassim.
Khan Sahib Allibhai Mahomedbhai Mansuri.
Khan Saheb Haji Hazrat Khan Mohidin Khar.
Khan Saheb Ismli Abdulhussein Shaherwala.
Mr. Abdulla Avjal Godad.
Mr. Sultanali Salemanji Ghulam Husain.
Mr. Abdul Kadir Khan Abdul Aziz Khan.

Mr. Mahomed Salauddin Karimuddin.
Sheikhan Saheb Bade Saheb Khateeb.
Sardar Mahaboob Allikhan Muhammad Akbarkhan Biradar.

Khan Saheb Ismail Saheb Madar Saheb Bedrekar.
Mr. Shahajadesaheb Haidersaheb Sayad.
The Hon'ble Khan Bahadur Ghulam Hussein Hidayatalla, B.A., LL.B., (Minister).

Sayed Nabi Bakhsh Shah.
Khan Bahadur Khalir Baksh walad Ghulam Mahammad Khan Laghari.
Mr. Muhammad Abid walad Khair Muhammad Abidani.

Khan Bahadur Dhani Baksh walad Ali Mardon Khan Jatoi.
Khan Saheb Gulam Muhammad Abdulla Khan Isran.
Khan Saheb Shah Nawas Ghulam Murtaza Bhutto.

Wadero Kaisar Khan walad Ghulam Mahomed Khan Bozdar.
Wadero Mahomad Panah walad Ghulam Kadir Khan Drakhan.
Mr. Jan Mahomed Bhurgri.

Mr. Kalandarbaksh Sufi.
Khan Saheb Haji Imambaksh walad Khan Bahadur Ghulam Rasul Jatoi.
Khan Saheb Sher Mahommad Khan Karam Khan Bijarani.

Mr. Joe Addyman.
Mr. Harold Reginald West Watson.
Sardar Vishnu Narayan Mutalik.

Sardar Naharsinghji Ishwarsinghji, Thakor of Amod.

Mr. Mahomed Kamal Shah walad Kabul Mahomed Shah Sayed.

The Hon'ble Mr. Raghunath Purushotam Paranjype, B SC. (Bom.), M.A. (Cantab), (Minister).

Mr. H. P. W. Macnaghten.

Mr. S. J. Gillum.

Sir M. De P. Webb, Kt., C.I.E., C.B.E.

Mr. A. Greville Bullocke.

Mr. Mangaldas Girdhardas.

The Hon'ble Mr. Chunilal Vijbhukhandas Mehta, M.A., LL.B., (Minister).

NOMINATED MEMBERS.
Officials.

Major-General W. E. Jennings, M.D., I.M.S.
Mr. W. C. Shepherd, I.C.S.

Mr. J. Ghosal, C.I.E., I.C.S.
Mr. F. G. Pratt, I.C.S.

Mr. P. R. Cadell, C.S.I., C.I.E., I.C.S.
Mr. E. M. Proes.

Mr. J. Crerar, C.I.E., I.C.S.
Sir Lawless Hepper, Kt.

Mr. O. Rothfeld, I.C.S.
Mr. C. M. Baker, C.I.E., I.C.S.

Mr. F. C. Griffith, O.B.E., C.S.I.
Mr. P. J. Mead, C.S.I., C.I.E., I.C.S.

Mr. D. N. Bahadurji, Bar.-at-Law.
Mr. F. B. P. Lorry.

Non-Officials.

Rao Bahadur Ganesh Krishna Sathe, C.I.E.

Mr. Cowasji Jahangir (Jr.), C.I.E., O.B.E.

Mr. A. S. Osborne.

Mr. D. J. Ferreira.

Mr. D. D. Gholap.

Mr. Kanji Dwarkadas.

Mr. C. N. Wadia, C.I.E.

The Madras Presidency.

The Madras Presidency, officially the Presidency of Fort St. George, together with the Native States, occupies the whole southern portion of the peninsula, and, excluding the Native States, has an area of 141,075 square miles. It has on the east, on the Bay of Bengal, a coast-line of about 1,200 miles; on the west, on the Indian Ocean, a coast-line of about 450 miles. In all this extent of coast, however, there is not a single natural harbour of any importance; the ports, with the exception of Madras, which has an artificial harbour, are merely open roadsteads. A plateau, varying in height above sea-level from about 1,000 to about 3,000 ft., and stretching northwards from the Nilgiri Hills, occupies the central area of the Presidency; on either side are the Eastern and the Western Ghats, which meet in the Nilgiris. The height of the western mountain-chain has an important effect on the rainfall. Where the chain is high, the intercepted rain-clouds give a heavy fall, which may amount to 150 inches, on the seaward side, but comparatively little rain falls on the landward side of the range. Where the chain is low, rain-clouds are not checked in their westward course. In the central tableland and on the east coast the rainfall is small and the heat in summer excessive. The rivers, which flow from west to east, in their earlier course drain rather than irrigate the country; but the deltas of the Godaveri, Kistna and Cauvery are productive of fair crops even in time of drought and are the only portions of the east coast where agriculture is not dependent on a rainfall rarely exceeding 40 inches and apt to be untimely.

Population.

The population of the Presidency in 1911 was 41,402,000 and that of the Native States was 4,813,000. Hindus account for 89 per cent., Mahomedans for 6, Christians for 3, and Animists for 2. The vast majority of the population is of Dravidian race, and the principal Dravidian languages, Tamil and Telugu, are spoken by 15 and 14 million persons, respectively. Of every 1,000 people, 407 speak Tamil, 377 speak Telugu, 74 Malayalam, 37 Canarese and 23 Hindustani. It is remarkable that of the 41 millions of population all but quarter of a million belong to it by birth.

Agriculture.

About 68 per cent. of the population is occupied in agriculture, nearly 49 per cent. having a direct interest as landowners and tenants. The total cropped area of 1919-20 was 38.2 million acres as against a normal of 39 million acres. Though the area cultivated is a bit below normal, it is much greater than that of last year when the total area cropped was only 36 million acres The increase in the area cultivated is due to the season which was on the whole favourable from an agricultural point of view. As such, the yield of the chief food crops and industrial crops was greater than that of last year. But the area under cotton cultivation has appreciably decreased from 3·1 million acres of last year to 2·34 million acres, this being due to the fall in prices and the preference given to the cultivation of food crops and especially to want of sufficient rains in the early part of the year in Guntur and Nellore. The considerable decrease in the area of sugar cultivation is due to a similar reason. Of the principal food grains, rice was cultivated on 11·7 million acres as against 11·4 in a normal year; cholum or great millet is 5·5 million acres as against 5·2; kambu or spiked millet in 3 3 million acres as against 3·5 million acres; ragi or millet in about 2·5 million acres though it was less than that of a normal year by 9,700 acres. Of the industrial crops groundnut was cultivated in 1·1 million acres as against 1·5 in a normal year, and cotton in 2·3 million acres though it was about 67,386 acres more than in a normal year. The acreage under tea and coffee was above normal, being 45,000 in the case of the former and 54,000 in that of the latter, and there is also a tendency for increased output. Nearly one-third of the cultivated area on the east coast has ordinarily to be irrigated, whereas on the West Coast no irrigation is necessary. The irrigation works on the East include about 28,000 tanks, 6,200 river channels, 6,100 spring channels, 1,400 anicuts, nearly 400,000 ayacut wells and 225,000 supplemental wells of all sorts. The utilisation of machinery for purposes of agriculture is steadily increasing, there being about 600 pumping installations all over the Presidency though a very small number of these plants, namely 144, is under the supervision of the Government Industrial Department, and the rest private. The harvest prices of the principal food grains were higher than that of last year, and during the year under review the supply of locally grown grain was generally low and the shortage of rice especially made good by imports from Burma and Bengal. Of the two most important exports of Madras, namely, cotton and groundnut, cotton export has increased slightly in spite of the fall in prices owing to large quantities in stock at the hands of the ryots; and groundnut export has also been resumed due to the removal of trade restrictions. The major part of the export to the extent of 67 per cent. was to France. There is great scarcity of labour and wages of labour increase rapidly.

A special feature of the agricultural activities of the Presidency is a large industry which the planting community have built up contributing substantially to the great economic development of the country during the past half a century. They have organised themselves as a registered body under the style and title of "The United Planters' Association of Southern India" on which are represented the coffee, tea and rubber and a few other minor planting produce; while safeguarding their own industry they have been able to do a great deal in adding to the wealth and resources of the country generally. So important a place do they occupy in the body-politic, that the Government have given them special representation on the Madras Legislative Council, besides passing special legislation for the control of their labour. The Government have also appointed a Deputy Director of Agriculture for the planting districts, besides one or two expert officers working in their area. Two new agricultural stations were established during the year at Coonoor on the Nilgiris for fruit culture and for rearing silk worms. The three experimental stations established in the previous year at Siddapur (Coorg), Peermede (Travancore)

and Mooply (Cochin) for coffee, tea and rubber, respectively, were brought into working order as well as a fourth station for the study of rubber at Tenmalai (S. Travancore). By far the most notable event of the year in regard to agricultural education was the introduction of a new scheme for the complete separation from the beginning of the certificate and diploma courses with different qualifications for admission to each. An application was made during the year to the University for the treatment of agriculture as a new department of science in the existing Faculty of Arts and Sciences and for the institution of a new degree to be known as B. Sc. Ag. Agricultural and Scientific Research and Experiments were carried on satisfactorily. The Botanical Herbarium at the Agricultural College, Coimbatore, now contains more than 16,000 sheets of identified specimens. The receipts and expenditure were roughly Rs. 4 and Rs. 13 lakhs, respectively, in 1920-21. The Agricultural and Industrial Departments are under the Reformed Act transferred subjects and the Minister in charge of the departments has already on hand, schemes for the scientific development of these two departments including forest industries on a commercial scale.

Forests.

At the close of 1920-21 there were 19,325 square miles of forests in the presidency. The difficulties of forest conservancy were accentuated during the year by the general unrest and by the preaching of non-co-operation. The output of timber during the period was 98,450 tons. A somewhat interesting development was the supply of ebony logs for fittings in some of the new buildings under construction at Delhi. Another innovation was the supply of logs to the agents for timber to the Government of India in London. The timber of *Terminalia tomentosa* has commanded a sale in London for cabinet work at very high prices and the department is attempting to develop the market. A keen demand was noticed in the year for nux-vomica consequent on the growing employment of strychnine in the preparation of insecticides for use in agriculture. A specially interesting feature of the year was the visit paid to the Presidency by Mr. C. S Martin, Consulting Forest Engineer to the Government of India, whose reports on the evergreen forests of Malabar and Tinnevelly were under the consideration of the Government. Mr. Martin's expert knowledge and long practical experience of the modern lumbering methods followed in America give special weight to his opinions and his advice is likely to prove of the greatest value in the systematic exploitation of the more valuable but hitherto undeveloped forests in the Madras Presidency.

Industries.

The Department of Industries is in charge of a Director who has five Assistants with headquarters at Bezwada, Bellary, Coimbatore, Madura and Madras. The department participated in three exhibitions held during the year 1920 and the exhibits aroused a great deal of interest. The Textile branch of the Department and the Kerala Soap Institute, Calicut, were awarded gold medals. The Bureau of Industrial and Commercial Information continued useful as also the Pumping and Boring Department. In the latter general information and advice on engineering questions was given free of charge, but a fee of Rs. 10 was demanded in cases where local inspection was necessary. The greater part of the work done in the tannery during the year was in connection with chrome tannages. As a result of continued experiments the department was able to produce chamois leather of very good quality. Seven peripatetic weaving parties went about the presidency demonstrating to weavers the advantages of improved methods and appliances. The Industrial Chemist was carrying out inquiries in connection with the production of power alcohol. The construction of an Industrial Institute at Coonoor was sanctioned with a view to organise the fruit preserving industry on the Nilgiris and at the same time to encourage an extension of existing fruit culture. At the Industrial Laboratory, Coonoor, the investigation of high-grade inks was proceeded with. The Government Trades School, Madras, developed satisfactorily. The number of industrial schools assisted by Government during the year was 37. The total expenditure of the department in 1920-21 rose from Rs 6·30 lakhs to Rs. 8·69 lakhs while the total receipts fell from Rs. 3·31 lakhs to Rs. 2·58 lakhs.

Trade.

The total value of the sea-borne trade of the Presidency during 1920-21 was Rs. 73·28 crores showing an increase of Rs. 1·12 crores or 1·5 per cent. as compared with that of the preceding year and of Rs. 15·12 crores or 26 per cent. as compared with 1913-14. The year was more strikingly abnormal than any of the war years. There was an adverse balance of trade. Foreign trade including Government transactions declined by Rs. 2·03 crores or 4 per cent. Under foreign trade imports expanded by Rs. 11·45 crores or 82 per cent. while exports declined by Rs. 13·48 crores or 37 per cent. There was an increase of Rs. 11·59 crores or 87 per cent. in the imports of private merchandise. Imports of motor-vehicles and hardware went up by 216 and 126 per cent owing to restricted supply in previous years. There was heavy speculative buying of paper, the imports of which rose by 340 per cent. Exports of private merchandise declined by Rs. 13·16 crores or 37 per cent. Exports of leather declined by 72 per cent. and those of raw skins by 75 per cent. due to the large accumulation of stocks in the consuming countries and general trade depression. The total value of Government stores imported and exported amounted to Rs. 30·11 lakhs and Rs. 0·68 lakhs respectively. There was an increase of 14 per cent. in the total amount of tonnage (2·46 million tons) available during the year for the carriage of ordinary merchandise, but the total number of vessels entered and cleared declined from 2,588 to 2,476. The average tonnage per vessel was 994 tons. The trade with the United Kingdom represented 52 per cent. of the total trade, compared with 48 per cent. in 1919-20 and expanded by Rs. 95·48 lakhs or 4 per cent. The trade with the British Empire representing 71 per cent of the aggregate trade of the Presidency increased by Rs. 43·32

lakhs or 1 per cent. The trade with the continent of Europe showed an increase by Rs. 213·79 lakhs or 45 per cent. and the increase occurred mainly in the trade with Belgium Germany, Holland and Norway. The trade with France showed a decrease. Decreased transactions with Japan and China resulted in a reduction of Rs. 237·97 lakhs in the trade with Asiatic ports. Interchanges with America which were practically confined to the United States declined by Rs. 187·63 lakhs or 35 per cent. Madras, the chief port, registered a total trade of Rs. 38·26 crores, representing 52 per cent. of the aggregate trade of the Presidency. Tuticorin for the first time lost its place in favour of Cochin as the first of the outports, but it still retained its pre-eminence in the foreign trade. The trade of Cochin Calicut, Negapatam and Cocanada improved in 1920-21 while that of Tuticorin, Mangalore, Dhanushkoti and Cuddalore declined. During the year Kasaragod in the South Kanara district was thrown open to foreign trade.

Salt.

The introduction of the Reforms scheme under the Government of India Act of 1919 led to the transfer of 'Excise' to the administration of the ministry. The rules of inspection were revised in 1920-21 with a view to the higher officers being able to devote special attention to circles and ranges where administration is weak and to make surprise visits as much as possible. The Madras Salt Act of 1889 was so amended as to provide for the recovery of the arrears of cess from the licensees summarily. Revised arrangements were sanctioned for the supply of Madras Salt to Travancore and Cochin Durbars. According to the new orders the duty on wastages in transit hitherto credited to the British Government will in future be credited to the Durbars concerned. This arrangement follows the existing practice in regard to salt obtained by the Durbars from Bombay. Of the total quantity of 11,357,196 maunds issued from salt factories during the year, 37,090 maunds were issued for export by sea to Calcutta, 60,536 maunds to the French Government, 481,986 maunds to the Travancore Durbar and 296,158 maunds to fish-curing yards, leaving 1,408,426 maunds which were distributed by rail or road for ordinary consumption in the areas usually supplied. No salt was taken to Cochin during the year 1920-21. In addition to the quantity of locally produced salt issued for ordinary consumption 1,520,629 maunds were imported by sea principally from Bombay into the West Coast districts and 250,714 maunds were imported from Bombay and Goa by rail. The imports from these areas into Mysore by rail were 630,191 maunds. Thus the total quantity of salt issued for the use of the Madras Presidency amounted to 12,882,960 maunds. The total salt revenue in 1920-21 was Rs. 146·12 lakhs as against Rs. 151·54 lakhs in 1919 while the total charges amounted to Rs. 46·80 lakhs.

Excise.

During the last quarter of 1920-21 a wave of temperance enthusiasm spread over certain parts of the Presidency and non-co-operators and temperance workers managed to interfere seriously with the business of the liquor sellers. As a result there was a substantial fall in the rentals obtained in the Ceded districts for the arrack shops sold in February and March 1921. The number of shops dealing in country spirits was 6,008 and the consumption 1,723,868 proof gallons. The total revenue from country spirits was Rs. 233·9 lakhs. The total revenue from toddy was Rs. 256 lakhs. The duty on imported and locally-made foreign liquor was raised from Rs. 11-4 to Rs. 18-12 per proof gallon with effect from 1st March. The total abkari revenue was Rs. 258·57 lakhs. The policy of Government has always been to minimise temptation to those who do not drink and to discourage excess among those who do and to the furtherance of this policy all considerations of revenue have been absolutely subordinate. In South India the sources of illicit supply are abundant and easily accessible. If the shops are closed liquor can be had from almost any palm. Every man can have his beer tap in his own back garden. It is hoped that those who desire to combat the evils of drunkenness by wholesale closure of shops will realize the shortsightedness of the policy they are following.

Education.

During the year 1920-21, the total number of public institutions rose from 34,288 to 35,895 and their strength 16,92,280 to 16,26,000. The percentage of male scholars to male population was 6·9 and the corresponding percentage for female scholars was 1·8. The percentage of the number of scholars, male and female to the total population was 4·4. The total expenditure for the year rose from Rs. 267 lakhs to Rs. 319 lakhs. The proportions which the public and private funds bear to the total expenditure are 56 and 44 per cent. respectively. Elementary and secondary education had the largest share in contributing to the increase in expenditure. On the 31st March 1921 there were first grade colleges for men 14, second grade for men 11, first grade for women 2, second grade for women 1, Oriental Colleges 13, Law College 1, Engineering College 1, Training Colleges 3, Veterinary College 1, Forest College 1, Agricultural College 1, Secondary schools 585, Elementary schools 34,906, special schools 345 with pupils in all 16,92,280. There were also 3,836 private institutions imparting instruction to 1,07,570 pupils. The number of secondary schools exclusively for Indian girls rose from 44 to 51 and the total number of institutions for females was 2,645 and their strength was 3,75,761. During the year the Madras Elementary Education Act was passed. The appointment of the Deputy Directress of Public Instruction was made permanent. A Woman's Branch of the Indian Educational Service was created. The Women's Secondary Grade Final Examination open to all women without any restriction as regards age and attendance at a recognised secondary school was instituted. A committee of five persons was appointed to advise Government on the selection of candidates for direct recruitment to the higher branches of the Educational service. Training classes were newly attached to several schools. The department is under a Director of Public Instruction who is subordinate

to the Secretary to Government in the Law (Education) Department of the Government of Madras, Ministry of Education.

The Director is also the Commissioner of Government Examinations.

Government.

The Madras Presidency is governed on a system generally similar to that obtaining in Bombay and Bengal. At the head is the Governor usually selected from the ranks of British public men or of ex-Governors of Colonies. Under the Reform Scheme there are associated with the Governor four Members of the Executive Council in charge of the Reserved Subjects and three Ministers in charge of the Transferred Subjects. Madras administration differs, however, in some important respects from that of other major Provinces. There is no intermediate local authority between the Collector of the District and the authorities at headquarters, the Commissioner being unknown in Madras. Part of the power which would be reserved elsewhere for the Commissioner is given to the Collector, whose status is rather higher in Madras than elsewhere, and part is exercised by the Board of Revenue. Each member of the Board of Revenue is in fact a Commissioner for specific subjects throughout the Presidency. This conduces to administration by specialists and to the maintenance of equal progress in specific matters in every part of the Presidency, but it leaves the Government without an official who can judge of the general administration of large parts of the coruntry. For these and other reasons the Decentralisation Commission recommended that a system of Commissionerships be introduced in Madras.

Revenue and Finance.

Including the receipts and charges of the Civil and Public Works Departments but excluding the figures relating to Army, Posts and Telegraphs and Home Accounts as well as those relating to capital outlay and debt and remittance transactions the gross revenue amounted to Rs. 24,96,22,151 in 1920-21 while the gross expenditure was 12,76,57,179. The surplus amounted to Rs. 12,19,64,972. The year opened with a cash balance of Rs. 395 lakhs in the reserve treasury. The collections from supertax were Rs. 18,22,520 and the excess profits duty amounted to Rs. 38,32,284. The provincial accounts opened with a balance of Rs. 2,05,92,771 and closed with a balance of Rs. 57,92,114. The transactions of the year resulted in a deficit of Rs. 1,48,00,657 which was the net result of an aggregate revenue of Rs. 9,82,63,227 and an expenditure of Rs. 11,30,63,884.

Governor.

His Excellency Baron Willingdon of Ratton, G.C.S.I., G.C.I.E., G.B.E. Took his seat, 10th April 1919.

Personal Staff.

Private Secy., Mr. A. C. Duff, I.C.S.
Military Secy., Major K. O. Goldie, O.B.E.
Surgeon, Major D. P. Johnstone, R.A.M.C.
Aide-de-Camp, Major J. Mackenzie.
Aide-de-Camp, Captain N. C. deBrath.
Extra Aide-de-Camp, Capt. Donald Powell.
Extra Aide-de-Camp, Captain E. M. Allfrey, M.C.,
Commandant, H. E. the Governor's Body Guard, Major J. F. W. Ogilvie, M.C.Q.V.O.
Indian Aide-de-Camp, Risaldar Yakub Khan.

Members of Council.

Sir Lionel Davidson (Home).

C. G. Todhunter (Finance).

Khan Bahadur Muhamad Habibulla Sahib (Revenue).

Srinivasa Iyengar (Law).

Ministers.

A. Subbrayah Reddiar (Education).

Ramarayaningar (Local Self-Government).

K. Venkata Reddi (Development).

SECRETARIES TO GOVERNMENT.

Chief Secretary, A. R. Knapp, I.C.S.

Revenue Secretary, N. E. Marjoribanks, C.I.E., I.C.S.

Local and Municipal Secretary, F. J. Richards.

Public Works Secretary, W. Hutton.

MISCELLANEOUS APPOINTMENTS.

Commissioner of Revenue Settlement, etc., L. E. Buckley, I.C.S.

Director of Public Instruction, Richard Littlehailes, M.A.

Vice-Chancellor of Madras University, The Hon. Sir John Wallis.

Registrar of Madras University, F. Dewsbury.

Inspector-General of Police, Percy Beart Thomas.

Surgeon-General, Major-General Gerard Godfrey Giffard, C.S.I.

Sanitary Commissioner, Lt.-Col. E. L. Perry, D.S.O., I.M.S.

Accountant-General, A. Newmarch.

Inspector-General of Prisons, Major John Phillip Cameron, I.M.S.

Postmaster-General, A. W. L. Ryan.

Collector of Customs, A. M. Green.

Commissioner of Salt, Abkari, etc., Mr. N. E. Marjoribanks, C.I.E., I.C.S.

Inspector-General of Registration, C. R. M. Schmidt.

Director of the Kodaikanal and Madras Observatories, J. Evershed.

Supdt., Govt. Central Museum, and Principal Librarian, Connemara Public Library, F. H. Gravely.

Piscicultural Expert, H. C. Wilson.
Director of Agriculture, G. A. D. Stuart.
Consulting Architect, W. H. Nicholls.
Sheriff, C. T. Muthiah Chetty.
Chief Conservator of Forests, S. Cox, C.I.E.

Owing to the revised M. S. S. having been received after the formes were imposed, the list of Presidents and Governors has been tranferred to page 261.

Name of constituency.	Class of constituency.	Names of persons elected.
Madras City	Non-Muhammadan, Urban.	Diwan Bahadur Sir Pitti Tyagaraya Chetti Garu. M. R. Ry. Ottilingam Thanikachala Chettiyar Avargal. M. R. Ry. Rao Sahib Udipi Rama Rao Avargal.
Madura City	Do.	M. R. Ry. Krishnachar Vidyapoornachar Ramachari Avargal.
Trichinopoli *cum* Srirangam.	Do	M. R. Ry. T. Cuttia Pillai Thangavelu Pillai Avargal.
Cocanada City .. .	Do.	M. R. Rv. Diwan Bahadur Kommi Reddi Suryanarayanamurti Nayudu Garu.
Vizagapatam City ..	Do.	M. R. Ry. Rao Bahadur Saidapet Chandrasekhara Mudaliyar Avargal.
Tinnevelly *cum* Palamcottah.	Do.	M. R. Ry. Nanguneri Arunachalam Pillai Vanamamalai Pillai Somasundaram Pillai Avargal.
Anantapur	Non-Muhammadan, Rural.	M. R. Ry. Diwan Bahadur Pattu Kesava Pillai Avargal. M. R. Ry. Trichinopoly Sivasankaram Pillai Avargal.
Arcot, North	Do.	M. R. Ry. Wallajanagar Vijiaraghava Mudaliyar Avargal. M. R. Ry. Arcot Thangavelu Naicker Avargal M. R. Ry. Diwan Bahadur Lalapetai Arunachala Ayyar Govindaraghava Ayyar Avargal.
Arcot, South	Do.	M. R. Ry. Diwan Bahadur Agaram Subbarayalu Reddiyar Avargal. M. R. Ry. Agaram Thandapani Muttukumaraswami Chettiyar Avargal. M. R. Ry. Ramanuja Srinivasa Ayyangar Avargal.
Bellary	Do.	M. R. Ry. Arcot Ranganatha Mudaliyar Avargal. M. R Ry. Pulamati Siva Rao Garu.
Chingleput	Do.	M. R. Ry. Diwan Bahadur Chunampet Arunachala Mudaliyar Avargal. M. R. Ry. Arcot Ramaswami Mudaliyar Avargal.
Chittoor	Do.	M. R. Ry. Bollini Muniswami Nayudu Garu. M. R. Ry. Mogilireddigari Narayanaswami Reddi Garu.
Coimbatore.	Do.	M. R. Ry. Vellakkinar Chinnappa Goundan Vellingiri Goundan Avargal. M. R. Ry. Coimbatore Venkatesa Ayyangar Venkataramana Ayyangar Avargal. M. R. Ry. Tiruppur Angappa Chettiyar Ramalinga Chettiyar Avargal.

Name of constituency.	Class of constituency.	Names of persons elected.
Cuddapah	Non-Muhammadan, Rural.	M. R. Ry. Rangarampeta Pasupuleti Devarajulu Nayudu Garu. M. R. Ry. Rai Bahadur Thaiyar Madabusi Narasimhacharlu Garu.
Ganjam	Do	M. R. Ry. Sriman Bisvanath Das. M.R.Ry. Rao Bahadur Annepu Parasuramdoss Patro. M. R. Ry. Sriman Sasi Bhushan Rath.
Godavar.	Do	M. R. Ry. Diwan Bahadur Duriscty Seshagiri Rao Pantulu Garu. M. R. Ry. Achanta Subbarayudu Garu.
Guntur	Do	M. R. Ry. JagarlamudyKuppuswami Garu. M. R. Ry. Rao Sahib Paidupati Cooreroolоo Nayudu Yatirajulu Nayudu Garu. M. R. Ry. Panguluru Vennkatasubba Rao Garu
Kanara, South	Do.	M. R. Ry. Rao Bahadur Attawar Ramaya Punja Avargal. M. R. Ry. Kasaragod Sadasiva Bhat Avargal.
Kistna	Do.	M. R. Ry. Diwan Bahadur Mocherla Ramachandra Rao Pantulu Garu. M. R Ry. Rai Bahadur Kurma Venkata Reddi Nayudu Garu. M. R. Ry. Kovelamudi Gopala Krishnayya Garu. M R. Ry. Rao Bahadur Tikkani Balaji Rao Nayudu Garu.
Kurnool	Do.	M. R Ry. Rao Bahadur Chimalavagupalli Venkata Ranga Reddi Garu. M. R. Ry. Konadam Sarabha Reddi Garu.
Madura District	Do.	M. R. Ry. Ponnambala Tyagarajan Avargal. M. R. Ry. Chengalvaraya Ponnuswami Nayudu Avargal. M R. Ry Kumara Padma Gopala Menon Avarga .
Malabar *cum* Anjengo ..	Do.	M. R. Ry. Diwan Bahadur Mannath Krishnan Nayar Avargal. M. R. Ry. Kalliat Chattukkutti Nambiyar Avargal.
Nellore	Do.	M. R. Ry. Katamreddi Adinarayana Reddi Garu. M. R. Ry. Rao Bahadur Amancherla Subba Krishna Rao Pantulu Garu.
Ramnad	Do.	M. R. Ry. Thiruppullani Chellam Ayyangar Srinivasa Ayyangar Avargal. M R Ry Paramasivan Chettiyar Chidambaram Chettiyar Muttu Chettiyar Avargal.
Salem	Do.	M. R. Ry. Sankara Chettiyar Ellappa Chettiyar Avargal. M. R. Ry. Bhavani Venkatagiri Ayyar Narasimha Ayyar Avargal.

Name of constituency.	Class of constituency.	Names of persons elected.
Tanjore	Non-Muhammadan, Rural.	M. R. Ry. Tyagaraja Somasundara Mudaliyar Avargal. M. R. Ry. Rao Bahadur Veerayya Appaswami Vandayar Avargal. M. R. Ry. Rao Bahadur Komal Seshappa Ayyar Venkatarama Ayyar Avargal.
Tinnevelly district ..	Do.	M. R. Ry. Sundaralingam Pillai Tinnevelly Shanmukham Pillai Avargal. M. R. Ry. Ravilla Appaswami Nayudu Garu.
Trichinopoly district ..	Do.	M. R. Ry. Kattuputhur Chidambara Reddiyar Venkatachala Reddiyar Avargal. M. R. Ry. M. Rangaratnam Ayyar Seturatnam Ayyar Avargal.
Vizagapatam district ..	Do.	M. R. Ry. Chintalapati Venkata Surya Narasimha Raju Garu. M. R. Ry. Mantha Suryanarayana Garu.
The Nilgiris	Do.	M. R. Ry. Ramaswami Kandaswami Shanmukham Chettiyar Avargal.
Madras City (Muhammaddan).	Muhammadan, Urban.	Khan Sahib Muhammad Usman Sahib Bahadur.
Madura and Trichinopoly *cum* Srirangam.	Do.	A. Pichai Ibrahim Ravuttar Saiyid Ibrahim Ravuttar.
Northern Circars (Muhammadan.)	Muhammadan, Rural.	Munshi Muhammad Abdur Rahaman Sahib Bahadur.
East Coast (Muhammadan)	Do.	Qadir Nawaz Khan Sahib Bahadur.
Ceded districts (Muhammadan.)	Do.	Saiyid Muhammad Padsha Sahib Bahadur.
North Arcot *cum* Chingleput.	Do.	Abdur-rahman Khan Sahib Bahadur.
Central districts (Muhammadan.)	Do	Saiyid Diwan Abdul-razzaq Sahib Bahadur.
Tanjore (Muhammadan) ..	Do.	Vappakandu Hamid Sultan Morakkayar Sahib Bahadur.
Madura *cum* Trichinopoly (Muhammadan Rural.)	Do.	Abbas Ali Khan Bahadur.
Ramnad *cum* Tinnevelly (Muhammadan).	Do	Anumanthakudi Muhammad Mustapha Ravuttar Ahmad Miran Sahib Bahadur.
Malabar *cum* Anjengo (Muhammadan).	Do.	Acharath Daria Maliyammal Bavotti Sahib Bahadur. Kinsingantagath Kunhammad Koya Sahib Bahadur.
South Kanara	Do.	Abdul Qasim Beary Sahib Bahadur.
Northern districts (Christian).	Indian Christian	Mr. Alfred Tyagaraju Palmer.
Central districts (Christian)	Do	Mr. Muthayya David Devadoss.
West Coast (Christian) ..	Do.	M. R. Ry. Rai Sahib Emmanuel Cajetan Martin Mascarenhas Avargal.

Name of constituency.	Class of constituency.	Names of persons elected.
Tanjore and Trichinopoly *cum* Madura (Christian).	Indian Christian ..	M. R. Ry. Savarimuthu Udaiyar Arpudaswami Udaiyar Avargal.
Ramnad *cum* Tinnevelly (Christian).	Do	Mr. Edwin Periyanayakam.
European	European	Mr. Percival Walter Partridge
Anglo-Indian	Anglo-Indian	Mr. Thomas Richmond.
Northern Landlholders I ..	Landholders	M. R. Ry. Sri Srinivasa Rajamani Raja Deo, Zamindar of Mandasa.
Northern Landholders II..	Do.	M. R. Ry. Sri Meka Venkatadri Apparao Bahadur.
North Central Landholders	Do.	M. R. Ry. Panaganti Ramarayaningar Avargal.
South Central Landholders.	Do. ..	M.R. Ry. Paramasiva Subbarayan Avargal.
Southern Landholders ..	Do.	M. R. Ry. Bhaskara Raja Rajeswara Setupati *alias* Muthuramalinga Setupati Avargal, Raja of Ramnad.
West Coast Landholders ..	Do.	M. R. Ry. Kuthiravattath Prabhakaran Thampan Avargal.
Madras University ..	University	M. R. Ry. Seshadri Srinivasa Ayyangar Avargal, C.I.E.
Madras Planters	Planting	Mr. James Arthur Richardson.
Madras Chamber of Commerce.	Commerce and Industry.	Mr. James Fletcher Simpson. Mr. William Alexander.
Madras Trades Association.	Do.	Mr. Alexander Maclean MacDougall.
Southern India Chamber of Commerce.	Do.	M. R. Ry. Diwan Bahadur Govindass Chathurbuja Das Garu.
Nattukkottai Nagarathar's Association.	Do.	

Nominated.

The Hon'ble Diwan Bahadur Sir P. Rajagopala Achariyar Avargal, K.C.S.I., C.I.E.
Mr. Ernest Sampson Lloyd.
Mr. Robert George Grieve.
Mr. Frederick John Richards.
Mr. Archibald Young Gipps Campbell, C.I.E.
M. R. Ry. Mylai Chinnathambi Raja Avargal.
M. R. Ry. L. C. Guruswami Avargal.
M. R. Ry. R. Kesavulu Pillai Avargal.
M. R. Ry. M. C. Madurai Pillai Avargal.
M. R. Ry. G. Vandanam Avargal.
M. R. Ry. Diwan Bahadur Tirumalai Desika Achariyar Avargal.
M. R. Ry. S. R. Y. Ankinedu Prasad Bahadur.
M. R. Ry. Rao Bahadur Tatikonda Namberumal Chetti Garu.
The Reverend Earle Monteith Macphail, C.B.E.
M. R. Ry. Rao Bahadur C. B. Rama Rao Avargal
M. R. Ry. Diwan Bahadur R. Venkataratnam Nayudu Garu.
M. R. Ry. Rao Sahib Presinge Venkatarangayya Garu.
M. R. Ry. S. Somasundaram Pillai Avargal.
M. R. Ry. Thambuswami Pillai Arumainatha Pillai Avargal
M. R. Ry. W. P. A. Soundara Pandia Nadar Avargal.
M. R. Ry. S. Muthumanicka Achariyar Avargal.
Khan Bahadur Mirza Abdul Husain.
Dr. Gilbert Slater.
Raja Sri Ramachandra Deo, Raja of Jeypore
M. R. Ry. C. P. Ramaswami Ayyar Avargal.

The Bengal Presidency.

The Presidency of Bengal, as constituted on the 1st April 1912, comprises the Burdwan and Presidency divisions and the district of Darjeeling, which were formerly administered by the Lieutenant-Governor of Bengal; and the Rajshahi, Dacca and Chittagong divisions which by the partition of the old Province had been placed under the administration of the Lieutenant-Governor of Eastern Bengal and Assam. The area of the Presidency is 84,093 square miles, and it possesses a population of 46,305,170 persons; included within this area are the two Native States of Cooch Behar and Hill Tippera, which are under the general supervision of the Government of Bengal. The area of the British territory is 78,700 square miles. Bengal comprises the lower valleys and deltas of the Ganges and Brahmaputra, and in the main consists of a great alluvial plain intersected in its southern portion by innumerable waterways. In the north are the Himalayan mountain and submontane tracts of Darjeeling and Jalpaiguri, and on the south-east the hills in Hill Tippera and Chittagong, while on the west the Chota Nagpur plateau is continued by an undulating tract running through the western portions of Midnapur, Bankura, Burdwan and Birbhum. The general range of the country however is very low, and a great fertile plain extends southward from Jalpaiguri to the forests and swamps known as the Sunderbans, which lie between the area of cultivation and the Bay of Bengal.

The People.

Of the inhabitants of the Presidency 24,237,052 or 52·4 per cent. are Mahomedans and 20,948,061 Hindus. These two major religions embrace all, but 2·4 per cent. of the population. Christians, Buddhists and Animists combined number a little over 1,120,000.

Bengali is spoken by ninety-two per cent. of the population of the Presidency and Hindi and Urdu by four per cent. The Oriya-speaking people number 293,168 and Naipali is the tongue of 89,000 persons principally residents in the Darjeeling and Jalpaiguri districts. The great majority of the speakers of the Munda languages are Santals in West and North Bengal.

Industries.

According to the returns of the Census of 1911 nearly 35¼ million or three-fourths of the population derive their support from pasture and agriculture, and of these nearly 30 millions are cultivators, and nearly 3¾ millions farm servants and field labourers. The area under jute in 1920 is estimated at 2,205,323 acres against 2,458,955 in 1919. Bengal is the most important rice-producing area in Northern India, and it is computed that about 85 per cent. of the cultivated area of the Presidency is devoted to its production. Other crops include barley, wheat, pulses and oil-seeds, the area devoted to the last named being 1,475,700 acres. Sugar is produced both from the sugar-cane and from the date-palm, and tobacco is grown for local consumption in nearly every district of Bengal. The area under tea in 1919-20 was 178,200 acres. There were 317 plantations employing a daily average of 155,131 permanent and 6,251 temporary hands.

Manufacture and Trade.

The main industries in this part of India in addition to the agricultural industry are the jute mill industry, the tea industry (largely an Assam industry) and coal mining. The jute mills in and around Calcutta constitute the principal manufacturing industry of the Presidency. The jute mills in Bengal worked 5 days a week from January 20th to March 28th, 1919, and for 4 days weekly for the rest of the year. From 1st January to 31st March 1920, the jute mills worked five days a week and from 1st April to 31st December 1920 six days a week. There were 72 mills belonging to 48 companies (including three private concerns) at work during the year 1919-20 with 40,676 looms and 847,487 spindles. The average number of persons employed daily was 277,393. There were no difficulties as regards the supply of labour. The value of the exports of Raw Jute by sea from Calcutta during 1919-20 increased by 1,084 lakhs to Rs. 2,269 lakhs. The quantity exported also was more than in the preceding year by 172,196 tons. The Jute cess benefited the Calcutta Improvement Trust to the extent of Rs. 8·56 lakhs, while Rs. 8·08 lakhs were collected in the preceding year. The exports of raw and manufactured jute represented 55 per cent. of Calcutta's exports during 1919-20 and these were with the exception of raw and manufactured cotton, India's premier export in that year. Other principal industries were cotton twist and yarn, silk yarn and cloth, hand-made cloth, sugar, molasses and paper. Twelve cotton mills were at work during 1919-20 employing daily on an average 12,294 persons. The silk weaving industry continues to decline. There was only one silk mill working during 1919-20 which employed 130 hands. The manufacture of tea is carried on an extensive scale in Darjeeling and Jalpaiguri. The capital employed by joint stock companies in the industry in India amounted to over Rs. 34 crores and the daily average labour force to 973,000 during 1919. In 1919 the number of coal mines under the scope of the Indian Mines Act worked in Bengal was 216. The total output for Bengal was 5,777,602 tons against 5,302,295 tons raised in 1918, while the output of all the mines in Bengal, Bihar and Orissa, and Assam amounted to 21,186,669 tons. The capital of joint stock, coal companies only in the industry employed in these provinces is approximately Rs. 731 lakhs. The daily average of persons employed in the coal mines in Bengal was 48,642 and in Bengal, Bihar and Orissa, and Assam 181,648. Three paper mills produced 25,070 tons of paper valued at Rs. 1,83,96,071 in 1919-20.

In 1919-20 the foreign sea-borne trade of Bengal (excluding treasure but including Government stores) amounted to Rs. 231 crores of which 90 crores represented imports and Rs. 141 crores exports. Of the total foreign and coasting trade of Bengal, 95 per cent. was the share of Calcutta. The six chief exports from Bengal are in order of importance; jute (raw and manufactures), tea, hides and skins (raw), grain, pulse and flour, seeds and

opium and the six leading imports are cotton goods, metals, sugar, machinery and mill-work, salt, and oils.

Administration.

The present form of administration in Bengal dates from December 1920. In 1912 the Government of the Province underwent an important change, when in accordance with the Proclamation of His Majesty the King-Emperor at Delhi the Province was raised from the status of a Lieutenant-Governor to that of a Governor-in-Council, thus bringing it into line with the Presidencies of Madras and Bombay. In 1920 under the Reform Scheme, which is fully described in the sections The Government of India and the Provincial Governments (*q. v.*) the system of Governor-in-Council was further expanded into a Governor-in-Council and Ministers. There are four members of the Executive Council, who are in charge of the "reserved subjects," and three Ministers, who are in charge of the "transferred subjects." The working of this system and the division of the administration into these two classes of subjects is fully described in the sections to which reference is made.

Bengal is administered by five Commissioners under the Governor in Council, the divisions being those of the Presidency, Burdwan, Rajshahi, Dacca and Chittagong. The unit of administration is the District Magistrate and Collector. As Collector he supervises the ingathering of the revenue and is the head of all the Departments connected with it, while as District Magistrate he is responsible for the administration of criminal justice in the district. The immediate superior of the District Magistrate is the Divisional Commissioner. Commissioners are the channels of communication between the local officers and the Government. In certain revenue matters they are, in their turn, subject to the Board of Revenue in Calcutta; in other matters they are under the direct control of Government.

Justice.

The administration of Justice is entrusted to the High Court of Calcutta which consists of the Chief Justice who is a Barrister and 14 Puisne judges including one additional judge who are Barristers, Civilians or Vakils. Below the High Court are the District and Additional Judges, the Small Cause Court and Subordinate Judges and the Munsifs. Of these officers the District and Additional Judges and a certain number of subordinate Judges are also endowed with the power of a Criminal Court while the remainder have jurisdiction in Civil matters only. Criminal Justice is administered by the High Court, the Courts of Session and the Courts of the various classes of Magistrates On its appellate side the High Court disposes of appeals from the order of a Court of Session, and it also confirms, modifies or annuls sentences of death passed by Sessions Courts. Calcutta has four Presidency Magistrates, two Municipal Magistrates and also a number of Honorary Magistrates and it possesses a Court of Small Causes with Judges including one Additional Judge who dispose of cases of the class that are usually heard in County Courts in England.

Local Self-Government.

By Bengal Act III of 1884 which regulates municipal bodies in the interior and its subsequent amendments the powers of Commissioners of municipalities have been increased and the elective franchise has been extended. Municipal expenditure now comprises a large number of objects, including veterinary institutions and the training and employment of Health Officers and Sanitary Inspectors and female medical practitioners. The Commissioners also have large powers in regard to the water-supply and the regulation of buildings. In Calcutta Act (III) of 1899 created three co-ordinate municipal authorities, the Corporation, the General Committee, and the Chairman. The total number of Commissioners is fifty, of whom 25 are elected, and the remainder appointed by Government and by commercial bodies. In order to improve the insanitary and congested areas of the city, the Calcutta Improvement Trust has been created with extensive powers. In the mofussil, District and Local Boards exercise considerable powers, with regard to Public Works, Education and Medical relief and Union Committees have been formed which deal for the most part with the control of village roads, sanitation and water-supply.

Bengal Act V of 1911 introduced a new system of self-government by the creation of village authorities vested with the power and duties necessary for the management of communal village affairs and entrusted with powers of self-taxation. The new village authority, to be called the Union Board, will replace the existing Chaukidari *panchayats* and the Union Committee and will deal with the village police, village roads, water supply, sanitation, primary school and dispensaries. The Act also empowers Government to create out of the members of the Union Board Village Benches and Courts for the trial of petty criminal and civil cases arising within the union. The Act has been extended to all Districts in the Presidency except Darjeeling, Chittagong, Melda and Pabna and about 1,500 Union Boards have been established.

Public Works.

The Public Works Department is under the charge of a Chief Engineer who is also the Secretary to Government in the P. W. and Railway Departments and the Irrigation Department is under the charge of second Chief Engineer who is as well the Secretary to Government in the Irrigation and Marine Departments.

The P. W. D. deals with questions regarding the construction of public buildings and roads and the carrying out of miscellaneous public improvements.

The Railway Department deals with questions regarding acquisition of lands required by the several Railways and alignment of main lines of Railways and Tramway projects.

The Irrigation Department deals with matters connected with the numerous embankments and drainage works as well as the waterways that intersect the Presidency.

The Marine Department deals with all questions connected with the Bengal Pilot Service, merchant shipping, boiler commission, smoke nuisance and the importation, possession, &c., of petroleum and the importation of explosives.

Police.

The Bengal Police force comprises the Military Police, the District Police, the Railway Police, and the River Police. The Bengal Police are under the control of the Inspector-General of Police, the present Inspector-General being a member of the Imperial Police Service. Under him are Deputy Inspectors-General, for the Dacca Range, the Rajshahi range, the Presidency range, the Burdwan range and the Bakarganj range and also two Deputy Inspectors-General, one in charge of the C. I. D. and the other in charge of the Intelligence Branch of the C. I. D. Each district is in charge of a Superintendent, and some of the more important districts have an Additional Superintendent. The Railway Police is divided into three distinct charges each under a Superintendent. The River Police is also under a Superintendent. The cadre comprises Assistant Superintendents, Deputy Superintendents, Inspectors, Sub-Inspectors, Sergeants, head constables and constables. There is also a Village Police, composed of daffadars and chowkidars, who receive a monthly salary which is collected from the villages or unions by the Panchayat or Union board. In the Madaripur Sub-Division however the daffadars who are whole-time servants are paid partly by Government and partly by the Panchayat. The Calcutta City police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Commissioner has under him Deputy Commissioners, Assistant Commissioners, Inspectors, Sub-Inspectors, European Sergeants, head constables and constables. A school for the training of recruits for the Calcutta Police force has been established at Calcutta. There is a training college and school at Sardah, in the district of Rajshahi where newly appointed gazetted officers, Sub-Inspectors and constables of the Bengal police learn their duties. There are two other schools at Dacca and Berhampore for the training of constables. The annual cost of the Police is over 63 lakhs.

Medical.

The head of the Medical Department is the Surgeon General with the Government of Bengal, and Sanitation is in charge of the Sanitary Commissioner, the former appointment is always held by a member of the Indian Medical Service, while the latter post is also ordinarily held by a member of that service. There is also a Sanitary Engineer for the Presidency. In the districts the Civil Surgeons are responsible for medical work. There are 22 hospitals in Calcutta, 10 of which are supported by the Government and 439,806 persons were treated at these institutions of whom 34,703 were in-patients. In the mofussil districts there are 738 hospitals and dispensaries; the number of patients treated in them was 6,368,171 including 72,028 inpatients.

Education.

In the Presidency of Bengal education is imparted partly through Government agency and partly through private bodies, assisted to some extent by Government grants-in-aid. Government maintains three Arts Colleges in Calcutta (of which one is a college for women and one the Sanskrit College), one at Hughli, one at Krishnagar, one at Dacca, one at Rajshahi and one at Chittagong. It also maintains two training colleges, one at Calcutta and one at Dacca, for teachers who teach in secondary schools through the medium of English and 5 normal schools, one in each division, for the training of teachers in secondary schools through the medium of the vernacular; also an engineering college at Sibpur and an engineering school at Dacca, a medical college, a veterinary college, a school of art and a commercial school in Calcutta and a weaving school at Serampore. It also provides at the headquarters of all districts, except Burdwan and Midnapore, and also at certain other mofussil centres, High English schools for the education of boys, while to some Government Arts Colleges high schools are attached. In Calcutta there are four Government high schools for boys, two of which are attached to Presidency College and one to the Sanskrit College. Government high schools for girls exist only in the headquarters stations of Calcutta, Dacca, Mymensingh and Chittagong. The other secondary schools, with the exception of a few middle schools managed either by Government or by municipal and district boards, are under private control. The administration of primary education in all areas, which are not under municipalities, rests with the district boards, grants being given from provincial revenues to the boards, which contribute only slightly from their own funds. Only in backward localities are such schools either entirely managed, or directly aided, by Government. Apart from the institutions referred to above, 107 institutions called Guru Training Schools are maintained by the Departments for the training of vernacular teachers. For the education of Mohomedans, there are senior madrasas at Calcutta, Dacca, Chittagong and Hughli, and one junior madrasa at Rajshahi which are managed by Government. There are also certain Government institutions for technical and industrial education. A large proportion of educational work of every grade is under the control of various missionary bodies, which are assisted by Government grants-in-aid.

The municipalities are required to expend a certain proportion of their ordinary income on education. They are mainly responsible for primary education within their jurisdiction, but schools in these areas are eligible also for grants from Government. These bodies maintain a second grade Arts College and a high school at Midnapore, a high school at Burdwan, a high school at Santipur and a high school at Chittagong.

There are in the Presidency :—

Arts Colleges	36	Secondary Schools	2,800
Law "	9	Primary Schools	46,240
Medical Colleges	2	Special "	1,527
Engrg. College	1	Private Institutions	2,259
Training Colleges	4		
Veterinary College	1		

with 19,53,909 pupils in all.

The Department is administered by a Director of Public Instruction, assisted by an Assistant Director and an Assistant Director for Muhammadan Education. Each division is in charge of a Divisional Inspector assisted by a certain number of Additional and Assistant Inspectors according to the requirements of the several divisions. Similarly the administrative charge of the primary education of each district is in the hands of a Deputy Inspector assisted by

Additional Deputy and Sub-Inspectors of Schools, the latter class officers being in some instances helped by officers of humbler status called Assistant Sub-Inspectors and Inspecting Pandits and Maulvis. Higher education is controlled by the University (Calcutta) established in 1857, administered by the Chancellor (the Governor-General and Viceroy of India), the Rector (the Governor of Bengal), the Vice-Chancellor (appointed by the Government of India, usually for two years at a time), and 110 Fellows, of whom 10 are ex-officio, 10 are elected by registered Graduates, 10 by the Faculties and the remainder 80 are nominated by the Chancellor. The University maintains a Law College, called the University Law College, Calcutta. The University is mainly an examining body, but it has now made itself responsible for the actual teaching of students, for which purpose it employs an agency which is quite distinct from the staffs of the affiliated colleges.

The following University Professorships have been founded:—(1) Prasanna Kumar Tagore Law Professorship, (2) Minto Professorship of Economics, (3) George V. Professorship of Mental and Moral Science, (4) Hardinge Professorship of Higher Mathematics, (5) Carmichael Professorship of Ancient Indian History and Culture, (6) Palit Professorships of Chemistry and Physics, (7) Sir Rash Behary Ghose Professorship of Applied Mathematics, Physics, Chemistry and Botany, (8) Two Professorships of English and (9) University Professorship of Comparative Philology. The new University of Dacca is expected to start work in July 1921.

The principal educational institutions are:—

GOVERNMENT ARTS COLLEGES.

Presidency College, Calcutta.
Dacca University.
Rajshahi College.
Chittagong College.
Sanskrit College.
Hughli College.
Krishnagar College.
Bethune College.

PRIVATE ARTS COLLEGES.

Aided.

Scottish Churches College, Calcutta.
St. Xavier's College, Calcutta.
Jagannath College, Dacca.
Brajamohan College, Barisal.
Anandamohan College, Mymensingh.
Victoria College, Comilla.
Wesleyan College, Bankura.
Victoria College, Narail.
Hindu Academy, Daulatpur.
Serampore College.
St. Paul's Cathedral Mission College, Calcutta.
Edward College, Pabna.
Diocesan College, Calcutta.

Unaided.

City College, Calcutta.
Ripon College, Calcutta.
Bangabasi College, Calcutta.
Vidyasagar College, Calcutta.
Central College, Calcutta.
Krishna Chandra College, Hetampur.
Burdwan Raj College.
Uttarpara College.
Krishnath College, Berhampore.
Loreto House, Calcutta.
Carmichael College, Rangpur.
Rajendra College, Faridpur.
Bagerhat College, Khulna.
South Suburban College, Bhowanipur.

MUNICIPAL.

Midnapore College.

COLLEGES FOR PROFESSIONAL TRAINING.

Engineering—Government.

Civil Engineering College, Sibpur.

Teaching—Government.

David Hare Training College.
Dacca Training College.

Unaided.

L. M. S. Training College, Bhowanipore (Calcutta).
Training Department attached to Loreto House, Calcutta.

Aided.

Diocesan College, Calcutta.

Medicine—Government.

Medical College, Calcutta.

Law.

University Law College, Calcutta.
The Law Department, attached to the Dacca College.
The Law Department, attached to the Ripon College, Calcutta.

There are also Pleadership classes attached to the Government Colleges at Dacca, Rajshahi, Hoogly, Chittagong and Krishnagar and in the unaided college at Berhampore, the Ripon College and the Metropolitan Institution, Calcutta, and the Municipal College at Midnapore.

Administration.

GOVERNOR AND PRESIDENT IN COUNCIL.

His Excellency The Rt. Hon. Lawrence John Lumley Dundas, Earl of Ronaldshay, G.C.I.E. Took his seat, 27th March 1917.

PERSONAL STAFF.

Private Secretary, W. R. Gourlay, C.I.E., I.C.S.
Military Secretary, Major Henry George Vaux
Surgeon, J. C. Chalke.
Aides-de-Camp, Lt. M. A. Carthew-Yorstoun, M.B.E. and Lt C. B. Lyon.
Honorary Aides-de-Camp, Lt.-Col. C. D. M. Hindley and Lt.-Col. F. E. Wood.
Extra Aide-de-Camp, Lt. E. H. Smith, M.C.

Indian Aides-de-Camp, Risaldar Major Hira Singh Bahadur and Risaldar Faiz Mahamad Khan Bahadur.

Commander of Body Guard, Major K. Robertson.

MEMBERS OF COUNCIL.

The Hon. Sir Henry Wheeler.

„ „ Maharajadhiraja Bahadur of Burdwan.

„ „ Mr. H. Kerr.

„ „ Sir Abdur Rahim.

Ministers.

Sir Surrendranath Banerjee.

Mr. Provash Chandra Mitter.

Nawab Syed Nawab Ali Chowdhuri

SECRETARIAT.

Chief Secretary to Government, H. L. Stephenson, C.S.I., C.I.E.

Secretary, Revenue Department, M. C. McAlpin.

Secretary General Departments, L. S. S O'Malley.

Secretary, Financial Department, A. Marr.

Acting Secretary to the Council and Secretary, Legislative Department, C. Tindall, C.I.E.

Secretary to Government, Public Works Department, and Chief Engineer, C. P. Walsh.

Under-Secretary to Government, Public Works Department (Civil Buildings Branch), Adya Nath Basu.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, W. W. Hornell

Principal, School of Arts, P. Brown.

Inspector-General of Police, Robert Boyle Hyde.

Commissioner, Calcutta Police, Reginald Clarke. (Offg.)

Conservator of Forests, R. C. Milward.

Surgeon-General, W. H. B. Robinson, I.M.S.

Collector of Customs, Calcutta, A. H. Lloyd, B.A., I.C.S.

Commissioner of Excise and Salt, Satis Chandra Mukerji, I.C.S.

Accountant-General, H. G. Tomkins, C.I.E.

Inspector-General of Prisons, Lt.-Col. F. S. C. Thompson, I.M.S.

Postmaster-General, Ganendrao Prasad Roy.

Inspector-General of Registration, Khan Bahadur Amin-ul-Islam.

Director of Agriculture, G. Evans, M.A.

Protector of Emigrants, Lt.-Col. O. St. John Moses, M.D.

Sheriff, Rai Bahadur Dr. C. Bose.

Superintendent, Royal Botanic Gardens, Lieut-Colonel A. T. Gage.

Registrar of Co operative Credit Societies, J. M. Mitra.

LIEUTENANT-GOVERNORS OF BENGAL.

Frederick J. Halliday	1854
John P. Grant	1859
Cecil Beadon	1862
William Grey	1867
George Campbell	1871
Sir Richard Temple, Bart., K.C.S.I. ..	1874
The Hon. Ashley Eden, C.S.I.	1877
Sir Steuart C. Bayley, K.C.S.I. (*Offg.*) ..	1879
A. Rivers Thompson, C.S.I., C.I.E. ..	1882
H. A. Cockerell, C.S.I. (*Officiating*) ..	1885
Sir Steuart C. Bayley, K.C.S.I., C.I.E. ..	1887
Sir Charles Alfred Elliott, K.C.S.I. ..	1890
Sir A. P. MacDonnell, K.C.S.I. (*Offg.*) ..	1893
Sir Alexander Mackenzie, K.C.S.I. Retired 6th April 1898. ..	1895
Charles Cecil Stevens, C.S.I. (*Officiating*) .	1897
Sir John Woodburn, K.C.S.I. .. .. Died, 21st Nov. 1902.	1898
J. A. Bourdillon, C.S.I. (*Officiating*) ..	1902
Sir A. H. Leith Fraser, K.C.S.I.	1903
Lancelot Hare, C.S.I., C.I.E. (*Offg.*) ..	1906
F. A. Slacke (*Officiating*)	1906
Sir E. N. Baker, K.C.S.I. .. .. .. Retired 21st Sept. 1911.	1908
F. W. Duke, C.S.I. (*Officiating*)	1911

The office of Lieutenant-Governor of Bengal was abolished on April 1st, 1912, when Bengal was raised to a Governorship.

GOVERNORS OF THE PRESIDENCY OF FORT WILLIAM IN BENGAL.

The Rt. Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.	1912
The Rt. Hon. Earl of Ronaldshay, G.C.I.E.	1917

BENGAL LEGISLATIVE COUNCIL.

(1) **Ex-officio—**

The Hon'ble Sir Henry Wheeler, K.C.I.E., C.S.I.
The Hon'ble Sir Bijay Chand Mehtab, K.C.S.I., K.C.I.E., I.O.M., Maharajadhiraja Bahadur of Burdwan.

The Hon'ble Mr. John Henry Kerr, C.S.I., C.I.E.

The Hon'ble Sir Abdur-rahim, Kt.

(2) **Official Nominated Members—**

Mr. W. C. Wordsworth.
,, Donald Hector Lees, I.C.S.

Lt.-Col. Frederick O'Kenealy, C.I.E., I.M.S.
Mr. John Lang, I.C.S.

,, Lewis Sydney Steward O'Malley, C.I.E., I.C.S.
,, Alexander Marr, I.C.S.

,, William Stenning Hopkyns, O.B.E., I.C.S.
Rai Amar Nath Das Bahadur.
Mr. John Arthur Laing Swan, I.C.S.
,, William Woodward Hornell, C.I.E.
,, Nalini Bhushan Gupta, C.I.E.
,, James Donald, C.I.E., I.C.S.
,, Cecil Henry Bompas, C.S.I., I.C.S.
,, Leonard Birley, C.I.E., I.C.S.
,, George G. Dey.
,, Charles F. Payne.

(3) **Nominated Non-Officials—**
Mr. Satish Chanddra Mukharji.
Babu Bhishmadeb Das.

Mr. Krishna Chandra Ray Chaudhuri.
Babu Hemchandra Bhattacharji.

Babu Ghaneshyamdas Birla.
Maulvi Abdur Rahim.

(4) **Elected Members.**

Name of Constituency.	Name of Member.
Non-Muhammadan.	
Calcutta North	Babu Jatindra Nath Basu.
Calcutta North-West	Mr. S. R. Das.
Calcutta East	Rai Radha Charan Pal, Bahadur.
Calcutta North Central	Dr. Haridhan Dutt, Rai Bahadur.
Calcutta South	Babu Surendra Nath Mallik.
Calcutta South Central	Mr. D. J. Cohen.
Hooghly Municipal	Rai Mahendra Chandra Mitra Bahadur.
Howrah Municipal	Babu Nitya Dhone Mukharji.
24-Parganas Municipal North	Sir Surendra Nath Banarji, Kt.
24-Parganas Municipal South	Babu Surendra Nath Roy.
Dacca City	Rai Peary Lal Das Bahadur, M.B.E.
Burdwan	Rai Nalinaksha Basu Bahadur. Raja Mani Lal Singh Ray.
Birbhum	Rai Abinash Chandra Banarji Bahadur.
Bankura West	Babu Rishindra Nath Sarkar.
Bankura East	Mr. Ajay Chandra Dutt.
Midnapore North	Raja Narendra Lal Khan.

Name of Constituency.	Name of Member.
Midnapore South	Babu Sharat Chandra Jana.
	Babu Sharat Chandra Mukhopadhaya
Hooghly *cum* Howrah (rural)	Babu Phanindra Lal De.
	Babu Satish Chandra Mukharji.
24-Parganas, rural, Central	Babu Hem Chandra Laskar.
24-Parganas, rural, South	Mr. Dhirendra Chandra Ghosh.
24-Parganas, rural, North	Rai Harendra Nath Chaudhuri.
Nadia	Maharaja Kshannish Chandra Roy Bahadur.
Murshidabad	Babu Surendra Narayan Sinha.
Jessore South	Babu Nalini Nath Roy
Jessore North	Babu Bhabendra Chandra Roy.
Khulna	Babu Sailaja Nath Roy Chaudhuri.
Dacca rural	Babu Jogendra Nath Roy.
Mymensingh West	Raja Manmatha Nath Roy Choudhury.
Mymensingh East	Mr. Sudhangshu Mohan Bose
Faridpur North	Dr. Jatindra Nath Maitra, M.B.
Faridpur South	Babu Jogendra Krishna Roy.
Bakarganj North	Babu Nibaran Chandra Das Gupta.
Bakarganj South	Babu Nirode Behari Mallik.
Chittagong	Babu Annada Charan Dutta, M.A., B.L.
Tippera	Babu Indu Bhushan Dutt.
Noakhali	Babu Rasik Chandra Charmakar.
Rajshahi	Babu Kisori Mohan Chaudhuri.
Dinajpur	Babu Tanka Nath Chaudhuri.
Rangpur	Rai Sahib Panchanan Barma, M.B.L., M.A., B.L.
	Babu Jogesh Chandra Sarkar, B.L.
Bogra *cum* Pabna	Sir Ashutosh Chaudhuri.
Malda	Babu Nilmani Ghatak.
Jalpaiguri	Babu Prasanna Deb Raikot.
Muhammadan.	
Calcutta North	Vacant.
Calcutta South	Mr. Z. R. Z. Suhrawardy.
Hooghly *cum* Howrah Municipal	Dr. Hasan Suhrawardy.
24-Parganas Municipal South	Vacant.
24-Parganas Municipal North	Maulvi Syed Muksood Ali.
Dacca City	Nawabzada Khawja Muhammad Afzal.
Burdwan Division North	Muhammad Madassur Hussain.
Burdwan Division South	M. H. S. Suhrawardy.
24-Parganas, rural	Syed Nasim Ali.
Nadia	Syed Erfan Ali.
Murshidabad	Maulvi Ekramul Huq.
Jessore North	Khan Bahadur Abdus-Salam.
Jessore South	Maulvi Hafizuddin Ahmed.
Khulna	Vacant.
Dacca West, rural	Dr. A. Suhrawardy.
Dacca East, rural	Khan Bahadur Khwaja Muhammad Azam.
Mymensingh West	Khandkar Arhamuddin.
	Maulvi Abdul Jabbar Pahlowan.
Mymensingh East	Nawab Syed Nawab Ali Choudhuri Khan Bahadur, C.I.E.
	Maulvi Muhammad Rafiquddin Khan.
Faridpur North	Abdul Karim.
Faridpur South	Maulvi Mesbah Uddin Ahmed.
Bakarganj North	Maulvi A. H. Muhammad Wazir Ali.
Bakarganj West	Maulvi Azahruddin Ahmed.
Bakarganj South	Maulvi Fazlul Karim.

Name of Constituency.	Name of Member.
Chittagong	Munshi Ayub Ali.
	Munshi Amir Ali.
Tippera	Shah Syed Emdadul Haq.
	Vacant.
Noakhali	Munshi Makramali.
	Munshi Jafar Ahmad.
Rajshahi South	Maulvi Emdaduddin Ahmed
Rajshahi North	Khan Bahadur Muhammad Ershad Ali Khan Chaudhuri.
Dinajpur	Maulvi Yaquinuddin Ahmed.
Rangpur West	Maulvi Shah Abdur Rauf, B.L.
Rangpur East	Maulvi Hamid-Ud-Din Khan.
Bogra	Khan Bahadur Hafizar Rahman Choudhuri.
Pabna	Khan Bahadur Maulvi Wasimuddin Ahmed.
Malda *cum* Jalpaiguri	Mr. Kabiruddin Ahmed.
European.	
Presidency and Burdwan	Mr. John Campbell Forrester.
	Col. Archibald John Pugh.
	Mr. William Rowe Rae.
Dacca and Chittagong	Mr. Malcolm Cathcart.
Rajshahi	Mr. Walter Lancelot Travers.
Anglo-Indian.	
Anglo-Indian	Mr. H. Barton.
	,, H. A Stark.
Landholders.	
Burdwan	Rai Lalit Mohan Singh Ray Bahadur.
Presidency	Mr. Provash Chandra Mitter, C.I.E.
Dacca	Babu Brojendra Kishore Ray Choudhury.
Chittagong	Rai Upendralal Ray Bahadur.
Rajshahi	Kumar Shibshekhareswar Ray.
Calcutta University	Rai Jogendra Chandra Ghosh Bahadur.
Commerce and Industry.	
Bengal Chamber of Commerce	Mr. Robert Middleton Watson Smyth
	,, Alexander Cochran, C.B.E.
	,, Campbell Ward Rhodes, C.B.E.
	,, James Campbell.
	,, James Edward Ray
	,, George Morgan.
Indian Jute Mills Association	Mr. Reginald Hugh Lloyd Langford James.
	,, Bernard Alfred White. (Resigned).
Indian Tea Association	Mr. Alexander Douglas Gordon.
Indian Mining Association	Mr. Willoughby Langer Carey.
Calcutta Trades Association	Mr. Francis Augustus Larmour.
Bengal National Chamber of Commerce ..	The Hon'ble Raja Hrishikesh Laha, C.I.E.
	Babu Amulyadhan Addy.
Bengal Marwari Association	Babu Kesharam Poddar.
Bengal Mahajan Sabha	Mr. Tarit Bhushan Roy.

The United Provinces.

The United Provinces of Agra and Oudh lie in practically the centre of Upper India. They are bounded on the north by Tibet, on the north-east by Nepal, on the south and south-east by Bengal, on the south by two of the Chota Nagpur States of the Central India Agency and the Saugor District of the Central Provinces, and on the west by the States of Gwalior, Dholpur, Bharatpur, Sirmor, and Jubbal, and by the Punjab. Their total area amounts to 107,267 square miles, to which may be added the area of the two Native States of Tehri and Rampur, both of which lie within the United Provinces, 5,079 square miles and the newly-created independent State of Benares with an area of 865 miles, giving a total of 112,346 square miles. The total population is 45,590,946.

The Provinces, originally termed the North-Western Provinces and so amalgamated in 1877, receiving their present designation in 1902, include four distinct tracts of country: portions of the Himalayas, the sub-Himalayan tracts (the Kumaon), the great Gangetic plain and portions of the hill systems of Central India (Bundelkhand). The first two of these tracts are infertile and support a very sparse population and the Central Indian plateau is almost equally infertile, though better populated. The soil of the Gangetic plain, however, possesses an extreme fertility and here the density of population rises from 512 persons per square mile in the west, to 549 in the centre and 718 in the east, which gives the Provinces as a whole a greater population pressure on the soil than any other Provinces in India. In the south there are low rocky hills, broken spurs of the Vindhyan mountains, covered with stunted trees and jungle, and in the North the lower slopes of the Himalayas, clothed with dense forest, affording excellent big and small game shooting, and rising beyond in a tangled mass of ridges, ever higher and higher, until is reached the line of the eternal snows, but the greater part of the provinces consists of level plain, teeming with highly-cultivated fields and watered by four rivers—the Ganges, Jumna, Gogra and the Gumti.

The People.

The population is mainly Hindu, 85 per cent. ranking as such whilst Mahomedans number 14 per cent., the total of all other religions being less than 0·6 per cent. composed of Christians (Europeans and Indians), Jains, Aryas and Sikhs; the Aryas are the followers of the Arya Samaj sect, which obtains widely in the Punjab and has extended its influence to the United Provinces. The three main physical types are Dravidian, Aryan and Mongoloid, the latter being confined to the Himalayan and sub-Himalayan districts and the former to South Mirzapur and Bundelkhand, whilst the high-caste Aryans frequent the western Districts of the Province. Most of the people, however, show a mixed Arya-Dravidian origin. Three languages are spoken by the great majority of the people in the plains—Western Hindi, Eastern Hindi and Behari; Urdu, or Hindustani is a dialect of Western Hindi, though it contains a large admixture of Persian and Arabic words, which makes it a *lingua franca*.

Industries.

The principal industry is agriculture, which supports no less than 71·7 of the population. The soils of the Provinces fall into three groups; the valley soils of the Himalayas, the main alluvium and the Central Indian alluvium; the chief characteristic soil of the Central Indian alluvium is the black soil, with a lighter variant, though here also there are light loams and gravel. The Himalayan soils are of local origin and vary with the nature of the rock from which they have been formed, whilst the main alluvium soils are sand, clay and loam, the loam being, naturally, the most productive. The soil generally yields excellent crops of rice, millet, maize, linseed, cotton, wheat, sugarcane, pulses, barley and poppy, rice being grown mostly in low-lying, heavy clays. The greater part of the Provinces is highly cultivated, the rainfall varies from 50 to 60 inches in the Hills, to 40 inches in the Benares and Gorakhpur Divisions, whilst the Agra Division receives about 25 to 30 inches annually only. Drought seriously affected Bundelkhand and the Agra Division, in the past, but improved drainage, and irrigation (a protective system of irrigation works exists and is being extended) have enabled a complete recovery to be made and the agricultural prosperity of the Provinces is now high, though it varies with the rainfall. The great scourge has been, and is, that of plague, which hampers the agriculturist severely, and in the Terai, malaria still exacts a large toll. Land is held mostly on the ryotwari tenure in Bundelkhand and Kumaon, on zemindari tenure in Agra and taluqdari tenure in Oudh. The principal land owners in Oudh are the Taluqdars, some of whom own very large estates. The area held in taluqdari tenure amounts to 51 per cent. of the total area in Oudh.

Manufactures.

The Provinces are not rich in minerals, Coal exists in Southern Mirzapur, iron and copper are found in the Himalayan Districts, and there were mines of importance there formerly, but increased difficulty of working them as veins became exhausted resulted in the closure of most of them. Gold is found in minute quantities by washing in some of the rivers in the Hills. Limestone is found in the Himalayas and stone is largely quarried in the Mirzapur District. Cotton is ginned and spun throughout the provinces, as a home industry, and weaving, by means of hand-looms, is carried on in most districts. In 1901 nearly a million persons were dependent on weaving, 140,000 on spinning and 136,000 on cleaning, pressing, and ginning, but during the last decade these industries have been on the decrease. The largest industry is in Azamgarh district, where there are 130,000 looms. Silk spinning is confined almost entirely to the district of Benares, where the amous *Kinkob* brocade is made. Em-

broidery is manufactured in Lucknow, where the noted *chikan* work of silk on cotton or muslin is produced, and in Benares, where gold and silver work on velvet silk, crepe and sarsenet obtains. The glass industry is important in some districts, Benares and Moradabad are noted for their lacquered brass work, porcelain is manufactured at Ghazipur, and other industries are those of paper-making (Lucknow) dyeing, leather-work and fireworks. The chief centre of European and Indian industry is Cawnpore, which, situated in most advantageous position on the Ganges, possesses tanneries, cotton, woollen, jute and other mills, which have a large and ever increasing output (the woollen mill is the largest in India). There are cotton factories at Aligarh (famous for its locks), Meerut and Bareilly; Mirzapur (which produces also excellent carpets), Hardoi and Hathras have cotton mills. Excellent furniture is made at Bareilly, at Allahabad there are stone works, at Rosa there is a very large English distillery, with patent still, and the provinces can claim six breweries, with an out-turn of over a million gallons.

The largest trade centres are Cawnpore, Allahabad, Mirzapur, Benares, Lucknow, Meerut, Aligarh, Hathras, Muttra, Agra, Farukhabad, Moradabad, Chandausi, Bareilly, Saharanpur, Muzufarnagar, Ghaziabad, Khurja, Gorakhpur, Ghazipur, Pilibhit and Shahjahanpur.

Administration.

The Province was until the close of 1920 administered by a Lieutenant-Governor, chosen from the ranks of the Indian Civil Service. Under the Reform Scheme the Province was raised to the status of a Governor-in-Council, the Governor being assisted by two members of the Executive Council in charge of the Reserved Subjects and two Ministers in charge of the Transferred Subjects. The medium for the transaction of public business is the Secretariat, the Staff of which consists of five Secretaries and five Under-Secretaries. The Chief Secretary is in charge of the Revenue, Appointment, General Administration, Political and Forest Departments; another Secretary attends to the Medical, Judicial, Police, Educational and Sanitation Departments; whilst a third looks to the local Self-Government, Financial, Municipal, Miscellaneous and Separate Revenue Departments. The other two Secretaries belong to the Public Works Department, and are also Chief Engineers, one of whom deals with Irrigation, and the other with Roads and Buildings. Government spends the cold weather, October to April, in Lucknow and Allahabad, mostly in Lucknow, the Secretariat moves between these two places. The Governor and the Secretariat spend the hot weather in Naini Tal, but during the monsoon the Governor tours the plains, as he does also in the cold weather. The Board of Revenue is the highest court of appeal in revenue and rent cases, and it has important executive duties, being the chief revenue authority in the Provinces. There are forty-eight British districts, thirty-six in Agra and twelve in Oudh, average area 2,000 square miles and average population a million. Each District is in charge of a District Officer, termed a Collector and Magistrate in Agra and a Deputy Commissioner and Magistrate in Oudh and Kumaon, who is an Indian Civilian. The Districts are grouped together in Divisions under a Commissioner. There are nine Divisions, having an average area of nearly 12,000 square miles and a population of from 5 to 6 millions. The Districts are sub-divided into *tahsils*, of which there are 217, with an average area of 500 square miles and a population of 220,000. Each *Tahsil* is in charge of a *Tahsildar*, who is responsible for the collection of revenue, and also exercises judicial powers. *Tahsils* are divided into *parganas* which are units of importance in the settlement of land revenue. Subordinate to the *Tahsildars* are *kanungos*, of whom there are, on an average, three to a *tahsil*. These officials supervise the work of the *patwaris*, or village accountants, check their papers and form a link direct between the villagers and Government. For judicial purposes (revenue and criminal), the District Officer assigns a subdivision, consisting of one or more *tahsils*, as the case may be to each of his subordinates, who may be covenanted civilians, (Joint and Assistant Magistrates and Collectors) or members of the Provincial Service (Deputy Collectors and Magistrates). The Commissioner of the Bareilly and Kumaon Divisions are Political Agents for the Native States of Rampur and Tehri respectively and the Commissioner of Benares is the Political Agent for Benares State.

Justice.

Justice is administered by the High Court in the Province of Agra, and the Court of the Judicial Commissioner, in Oudh, which are the final appellate authorities in both criminal and civil cases. The former, which consists of a Chief Justice and five puisne Judges, two of whom are Indians, sits at Allahabad, and the latter, represented by a Judicial Commissioner and two Additional Commissioners, one of whom is an Indian, sits always in Lucknow. There are twenty-seven District and Additional District Judges, (Indian Civilians) twenty-one in Agra and six in Oudh, who have both original and appellate jurisdiction in civil and criminal cases, and occasional appellate jurisdiction in rent cases, but District Officers and their assistants, including *Tahsildars*, preside in both criminal and rent and revenue courts, and dispose of a good deal of the work. In Kumaon, the Commissioner is a High Court Judge in Civil cases, and a District Judge in Criminal cases. In the larger Cantonments, the Cantonment Magistrates have limited powers as Judges of a Small Cause Court. There are also Subordinate Judges, Judges of Small Cause Courts and Munsifs, who dispose of a large number of small civil suits, being specially empowered, in some cases, to decide suits up to Rs. 2,000, but generally they take cases up to Rs. 1,000, whilst Subordinate Judges hear cases up to Rs. 5,000. Appeals from Munsifs and Subordinate Judges go to the District Judges. Small Cause Court Judges try suits to the value of Rs. 500. There are also Honorary Munsifs, limited to Rs. 200 suits, and village Munsifs, whose jurisdiction is fixed at Rs. 20.

Local Government.

Local Government is exercised by means of District and Municipal Boards, the former levying local rates on land-owners; the latter deriving its revenue from octroi

and other forms of taxation. The aim is to abolish octroi, because it interferes with through trade. Eighty-five Municipalities possess the privilege of electing their own members and all the principal Boards now have non-official Chairman, with an Executive Officer who is directly responsible to the Board in all matters. Local self-government has been given a wider extension by the Municipalities Act, passed in 1916 under which the responsibilities of the boards and their chairmen have been largely increased. They deal with questions of sanitation, communication, lighting, town improvement, roads, water supply, drainage and education. Grants are made to Boards by Governments in some cases for special purposes from general revenues. Small towns, termed Act XX towns, also enjoy some measure of local self-government and it is under consideration to extend the principle here too.

Finance.

The Financial history of the Province has not been a happy one, inadequate settlements, *i.e.*, contracts between the Government of India and the local Government, and the severe famine in 1896 having caused Provincial bankruptcy, which for a long time necessitated rigid economy in order to accumulate reserves which could be spent on productive works. Recently liberal Imperial assignments have been made by the Government of India and the financial prospects are accordingly much brighter, though the war naturally hampered progress. The new system of Provincial Finance and the liabilities of the Province thereunder are fully described in the section "The Provincial Governments" (*q. v.*).

Public Works.

The Public Works Department is divided into the Roads and Buildings branch and the Irrigation branch, each of which is administered by a Chief Engineer, who is also a Secretary to Government. The Provinces are divided into three circles and ten divisions for the administration of roads and buildings, and into four circles and twenty divisions for irrigation purposes. Each circle is in charge of a Superintending Engineer, and each division is in charge of an Executive Engineer. The whole of the irrigation works constructed or maintained by Government are in charge of the Department, nearly all metalled roads, and also bridges on second-class roads, and generally, all works costing more than Rs. 1,000, except in Municipalities. The most important irrigation works within the last twenty years have been the construction of the Betwa Canal, the Fatehpur branch of the Lower Ganges Canal, the Mat branch of the main Ganges Canal, improvements in the Rohilkhand and Terai Canals and extensive drainage operations in the Doab districts of the Meerut and Agra division. Important irrigation extension works are now being considered.

Police.

The Police Force is divided into District and Railway Police and is administered by an Inspector-General, with five Deputies, one of whom is in charge of Railways, and two Assistants, forty-nine District Superintendents, two Railway Superintendents, and thirty Assistant Superintendents. There is a Police Training School at Moradabad. There is a local C. I. D. forming a separate detective department, under a Deputy Inspector-General, with an assistant. There is an armed police, specially recruited, and armed with the Martini Rifle. The present cost of the force is 133 lakhs. The administration of the Jail department is in charge of an Inspector-General of Prisons, who is a member of the Indian Medical Service.

Education.

Education is in part wholly State-maintained; and partly by means of grants-in-aid There is a State University at Allahabad, a Government Sanskrit College at Benares, whilst Arabic and Persian are taught in special classes at the Muir College, Allahabad, which also has a special science side, which of late has been greatly extended, and there is a Government Engineering College at Roorkee (Thomason College). There are aided Colleges in Lucknow (Canning College), (Reid Christian College), and (Isabella Thoburn College), Agra (St. John's), Aligarh (the Mahomedan Oriental College), Gorakpur, Cawnpore and Meerut, and an unaided College at Benares, the Central Hindu College. In Lucknow there is the Martiniere school, an entirely independent institution, for European and Anglo-Indian children, and there is a Girls' Martiniere connected with it, whilst in the Hill-Stations, Naini-Tal and Mussoorie, there are many excellent private scholastic institutions for European boys and girls, which are attended by students from all over India. Government maintain Training Colleges, for teachers in Lucknow and Allahabad, an Art Crafts and an Industrial School in Lucknow, and an Agricultural College at Cawnpore. Public Schools are almost entirely maintained by the District and Municipal Boards and primary education is almost entirely in their hands. Primary and female education are in a very backward condition, though there was in 1915-16 an increase in pupils The position of the Province in regard to Education is fully described under the head Education and in the tables attached thereto (*q. v.*)

Higher education is controlled by the Allahabad University (constd. in 1887) which consists of a Chancellor, Vice-Chancellor and seventy-five ordinary and four *ex-officio* Fellows, of whom some are elected by the Senate or by registered graduates and the Faculties, and the remainder nominated by the Lieutenant-Governor, in his capacity of Chancellor. The Faculties are those of Art, Science, Law and Medicine, and the University possesses an important Law School. A Mahomedan University was established at Aligarh in 1920 and a Hindu University has been inaugurated at Benares.

The principal educational institutions are:—

The Mahomedan University, Aligarh.

The Hindu (Benares) University, Benares.
St. John's College, Agra.
Muir College, Allahabad.
Queen's College, Benares.
Canning College, Lucknow.
Agra College.
Reid Christian College, Lucknow.

Meerut College.
Woodstock College, Mussoorie.
Bareilly College.
Christian College, Allahabad.
Christ Church College, Cawnpore.
Isabella Thoburn College, Lucknow.
Thomason College, Roorkee.
King George's Medical College, Lucknow.

Medical.

The Medical Department is in charge of an Inspector-General of Civil Hospitals. A Civil Surgeon is in charge and is responsible for the medical work of each district, and in a few of the larger stations he has an assistant. In two stations (Ranikhet and Almora) Medical Officers in military employ hold collateral civil charge. There are eighty-three Assistant Surgeons in charge of important dispensaries and a large number of Indian hospital assistants. Lady doctors and female hospital assistants visit *purda nashin* women in their own homes and much good work is done in this manner.

The best equipped hospitals, for Indian patients are the Thomason Hospital at Agra, King George's Hospital and the Balrampur Hospital at Lucknow. The Ramsay Hospital for Europeans at Naini Tal is a first class institution and there are also the Lady Dufferin Hospitals. King George's Medical College is one of the best equipped in the country, with a staff of highly efficient professors, and the hospital is the first in the Provinces. There is an X-Ray Institute at Dehra Dun, where valuable research work has been carried out and the Pasteur Institute at Kasauli take cases from all parts of India, and there are sanatoria for British soldiers in the Hills.

Administration.

Governor.—His Excellency Sir Harcourt Butler, K.C.S.I., C.I.E. Appointed December 1920.

Private Secretary—Captain Victor F. Gamble.

Aide-de-Camp.—Captain A. D. G. S. Batty.

Members of Council and Ministers.—The Hon. Mr. L. C. Porter, (Finance).

The Hon. the Raja of Mahmudabad (Home Member).

The Hon. Pandit Jagat Narain (Local Self-Government and Public Health.)

The Hon. Mr. C. Y. Chintamani (Education and Industries).

SECRETARIAT.

Chief Secretary to Government, G. B. Lambert, I.C.S.

Financial Secretary to Government, E. A. H. Blunt, O.B.E., I.C.S.

Judicial Secretary to Government, C. H. B. Kendall, I.C.S.

Secretary to Government, Public Works Dept. (Buildings & Roads, & Railways), H. M. Willmot.

MISCELLANEOUS APPOINTMENTS.

Opium Agent, Ghazipur, C. E. Wild.
Chief Conservator of Forests, P. H. Clutterbuck.
Director of Public Instruction, C. F. de la Fose.
Inspector-General of Police. L. M. Kaye.

Inspector-General of Civil Hospitals, Col J. K. Close, M.D., I.M.S.
Sanitary Commissioner, Major Cuthbert Lindsay Dunn.
Inspector-General of Registration, T. A. H. Way, I.C.S.
Commissioner of Excise, T. A. H. Way.
Accountant-General, Richard Waterfield.
Inspector-General of Prisons, Lt.-Col. J. M. Woolley.
Postmaster-General, H. S. H. Pilkington, C.I.E., M.V.O.
Chemical Analyser, Dr. E. H. Hankin.
Director of Agriculture, H. M. Leake, M.A.

LIEUTENANT-GOVERNORS OF THE NORTH-WESTERN PROVINCES.

Sir C. T. Metcalfe, Bart., G.C.B.	1836
The Right Hon. the Governor-General in the North-Western Provinces (Lord Auckland).	1838
T. C. Robertson	1840
The Right Hon. the Governor-General in the North-Western Provinces (Lord Ellenborough).	1842
Sir G. R. Clerk, K.C.B.	1843
James Thomson. Died at Bareilly. ..	1843
A. W. Begbie, *In charge*	1853
J. R. Colvin. Died at Agra	1853
E. A. Reade, *In charge*	1857
Colonel H. Fraser, C.B., Chief Commissioner, N.-W. Provinces.	1857
The Right Hon. the Governor General administering the N.-W. Provinces (Viscount Canning).	1858
Sir G. F. Edmonstone	1859
R. Money, *In charge*	1863
The Hon. Edmund Drummond	1863
Sir William Muir, K.C.S.I.	1868
Sir John Strachey, K.C.S.I.	1874
Sir George Couper, Bart., C.B.	1876

LIEUTENANT-GOVERNORS OF THE NORTH WESTERN PROVINCES AND CHIEF COMMISSIONERS OF OUDH.

Sir George Couper, Bart, C.B., K.C.S.I.	1877
Sir Alfred Comyns Lyall, K.C.B.	1882
Sir Auckland Colvin, K.C.M.G., C.I.E. ..	1887
Sir Chas. H. T. Crosthwaite, K.C.S.I. ..	1892
Alan Cadell (*Officiating*)	1895
Sir Antony P. MacDonnell, K.C.S.I. (*a*) ..	1895
Sir J. J. D. La-Touche, K.C.S.I.	1901

(*a*) Afterwards (by creation) Baron MacDonnell.

LIEUTENANT-GOVERNORS OF THE UNITED PROVINCES OF AGRA AND OUDH.

Sir J. J. D. La Touche, K.C.S.I.	1902
Sir J. P. Hewett, K.C.S.I., C.I.E.	1907
L. A. S. Porter, C.S.I. (*Officiating*).. ..	1912
Sir J. S. Meston. K.C.S.I.	1912
Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1918

GOVERNOR OF THE UNITED PROVINCES.

Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1920

UNITED PROVINCES LEGISLATIVE COUNCIL.

Name and nature of constituency.	Name or names of member or members returned by election.
Agra City, non-Muhammadan, Urban	Pandit Govind Sahai Sharma.
Cawnpore City do.	Rai Anand Sarup Bahadur.
Allahabad City do.	Lala Sheo Charan Lal.
Lucknow City do. .. .	The Hon'ble Pandit Jagat Narayan.
Benares City do.	Rai Ravinandan Prasad Bahadur.
Bareilly City do.	Lala Chhail Bihari Lal.
Meerut *cum* Aligarh do.	Lala Kishori Lal.
Moradabad *cum* Shahjahanpur, non-Muhammadan, Urban.	Babu Brijnandan Prasad.
Dehra Dun district, non-Muhammadan, Rural ..	Mr. Ugar Sen.
Saharanpur district do. ..	Lala Shadi Ram.
Muzafarnagar district do. ..	Pandit Hirde Nath Kunzru.
Meerut district (North) do. ..	Chaudhri Mukhtyar Singh.
Meerut district (South) do ..	Rai Sita Ram Sahib.
Bulandshahr district (East) do. ..	Pandit Nanak Chand.
Bulandshahr district (West) do ..	Thakur Manik Singh.
Aligarh district (East) do. ..	Dr. Manohar Lal.
Aligarh district (West) do. ..	Rao Sahib Sheo Dhyan Singh.
Muttra district do ..	Babu Narayan Dass.
Agra district do. ..	Munshi Narayan Prasad Ashthana.
Mainpuri district do. ..	Chaudhri Maharaj Singh.
Etah district do. ..	Rai Indra Narayan.
Bareilly district do. ..	Raja Kali Charan Misra.
Bijnor district do. ..	Chaudhri Sher Singh.
Budaun district do. ..	Rai Daya Shankar Sahib.
Moradabad district do. ..	Chaudhri Sardar Singh.
Shahjahanpur district do. ..	Babu Gur Sahai.
Pilibhit district do. ..	Pandit Brijnandan Prasad.
Jhansi district do. ..	The Hon'ble Mr. C. Y. Chintamani.
Jalaun district do. ..	Rai Gopaldas Sharma Sahib.
Hamirpur district do. ..	Babu Parmeshar Dayal Amist.
Banda district do. ..	Pandit Bhagwat Prasad Dube.
Farrukhabad district do. ..	Babu Gaindan Lal.

Name and nature of constituency.	Name or names of member or members returned by election.
Etawah district non-Muhammadan, Rural ..	Raja Hukm Tej Pratab Singh.
Cawnpore district do. ..	Pandit Balbhaddra Prasad Tiwari.
Fatehpur district do. ..	Major Des Raj Ranjit Singh.
Allahabad district do ..	Pandit Radha Kant Malaviya.
Benares district do. ..	Kunwar Nand Lal.
Mirzapur district do. ..	Mahant Parmanand Gir.
Jaunpur district do ..	Pandit Krishna Kant Malaviya.
Ghazipur district do ..	Babu Parsidh Narayan
Ballia district do ..	Thakur Hanuman Singh
Gorakhpur district (West) do. ..	Mr. Ajudhia Das.
Gorakhpur district (East) do. ..	Raja Indrajit Pratap Bahadur Sahi.
Basti district do. ..	Bhaya Hanumat Prasad Singh.
Azamgarh district do. .	Babu Ganga Prasad Rai.
Naini Tal district do. .	Rai Narayan Dat Chhimwal Sahib.
Almora district do. ..	Kunwar Anand Singh
Garhwal district do. ..	Thakur Jodh Singh B. Negi.
Lucknow district do. ..	Pandit Gokaran Nath Misra.
Unao district do. ..	Rai Ganesh Prasad Bahadur.
Rai Bareli district do. ..	Sardar Birpal Singh.
Sitapur district do. .	Thakur Rajendra Singh.
Hardoi district do. .	Thakur Mashal Singh.
Kheri district do. .	Babu Sita Ram
Fyzabad district do. .	Thakur Kesharya Prasad Singh.
Gonda district do. ..	Maharaja Sir Bhagwati Prasad Singh Bahadur, K.C.I.E., K.B.E.
Bahraich district do. ..	Pandit Ramsewak Pande.
Sultanpur district do. .	Raja Pratab Singh Bahadur.
Partabgarh district do. ..	Babu Shankar Dayal.
Bara Banki district do. ..	Rai Rajeshwar Bali.
Allahabad cum-Benares, Muhammadan, Urban ..	Saiyid Raza Ali.
Lucknow cum-Cawnpore do. ..	Mirza Muhammad Sajjad Ali Khan.
Agra and Meerut *cum* Aligarh do ..	Saiyid Al-i-Nabi.
Bareilly and Shahjahanpur cum-Moradabad do. ..	Saiyid Janab Ahmad.
Dehra Dun district do. ..	Maulvi Shahab-ud-din.

Names and nature of constituency.	Name or names of member or members returned by election.
Saharanpur district Muhammadan, Rural ..	Maulvi Shahab-ud-din.
Meerut district do.	Kunwar Jamshed Ali Khan.
Muzaffarnagar district do.	Kunwar Enayat Ali Khan.
Bijnor district do.	Khan Bahadur Chaudhri Amir Hasan Khan
Bulandshahar district .. do.	Nawab Muhammad Ahmad Said Khan.
Aligarh, Muttra and Agra districts. do.	Shaikh Muhammad Yusuf.
Mainpuri, Etah and Farrukhabad districts. do.	Munshi Atatmand Khan.
Etawah, Cawnpore and Fatehpur districts. do.	Munshi Zafar Husain.
Jhansi division do.	Mr. Masud-uz-zaman.
Allahabad, Jaunpur and Mirzapur districts. do.	Nawabzada Muhammad Yusuf.
Benares, Ghazipur, Ballia and Azamgarh districts. do.	Shah Badre Alam.
Gorakhpur district do.	Khan Bahadur Munshi Muhammad Ismail
Basti district do.	Mr. Abdul Hakim.
Moradabad north do.	Hakim Nawab Ali Khan.
Moradabad south do.	Saiyid Jafar Husain.
Budaun district do	Shaikh Saiyid Muhammad alias Maiku Mian
Shahjahanpur district do.	Munshi Fazl-ul-Rahman.
Bareilly district do	Khan Bahadur Munshi Rahimdad Khan.
Kumaun division *cum* Pilibhit, do.	Munshi Muhammad Zahur-ud-din Khan.
Gonda and Bahraich districts do. ..	Mirza Mahmud Beg.
Kheri and Sitapur districts do. ..	Nawab Sadiq Ali Khan.
Hardoi, Lucknow and Unao districts, Muhammadan, Rural.	Lieutenant Shaikh Shahid Husain, O.B.E.
Fyzabad and Bara Banki districts, Muhammadan, Rural.	Raja Saiyid Abu Jafar, C.I.E.
Sultanpur, Partabgarh and Rae Bareli districts, Muhammadan, Rural.	Munshi Muhammad Afzal.
European	Sir Henry John Ludlam Stanyon K.C.I.E., V.D.
Agra Landholders, north	Rai Kunwar Parmanand Bahadur.
Do. south	Raja Ragho Prasad Narayan Singh
Taluqdars	Raja Amarpal Singh, M.B.E. Raja Shambhu Dayal. Thakur Nawab Ali Khan. Thakur Jagannath Bakhsh Singh
Upper India Chamber of Commerce	Sir Thomas Smith, Kt., V.D. Mr. Samuel Henry Taylor.
United Provinces Chamber of Commerce	B. Vikramajit Singh.
Allahabad University	Pandit Iqbal Narayan Gurtu.

Name and nature of constituency.	Name or names of member or members returned, without contest
Cawnpore City, Non-Muhammadan, Urban.. ..	Rai Anand Sarup Bahadur.
Morabadad cum-Shahjahanpur, Non-Muhammadan, Urban.	Babu Brij Nandan Prasad.
Meerut district (North), Non-Muhammadan, Rural..	Chaudhri Mukhtyar Singh.
Budaun district do. ..	Rai Daya Shankar Sahib.
Cawnpore district do. ..	Pandit Balbhaddra Prasad Tiwari.
Almora district do. ..	Kunwar Anand Singh.
Unao district do. ..	Rai Ganesh Prasad Bahadur
Sitapur district do. ..	Thakur Rajendra Singh.
Sultanpur district do. ..	Raja Pratab Singh Bahadur.
Lucknow cum-Cawnpore, Muhammadan, Urban ..	Mirza Muhammad Sajjad Ali Khan
Agra and Meerut cum-Aligarh do. ..	Saiyid Al-i-Nabi.
Muzaffarnagar district, Muhammadan, Rural ..	Kunwar Enayat Ali Khan.
Bulandshahr district do. ..	Nawab Muhammad Ahmad Said Khan.
Benares, Ghazipur, Ballia and Azamgarh districts. do. ..	Shah Badre Alam.
Gorakhpur district do. ..	Khan Bahadur Munshi Muhammad Ismail.
Basti district do. ..	Mr. Abdul Hakim.
Moradabad (North) do. ..	Hakim Nawab Ali Khan.
Moradabad (South) do. ..	Saiyid Jafar Husain.
Budaun district do ..	Shaikh Saiyid Muhammad alias Maiku Miar.
Shahjahanpur district do ..	Munshi Wazl-ur-Rahman.
Bareilly district do. ..	Khan Bahadur Munshi Rahmdad Khan.
Kheri and Sitapur districts do. ..	Nawab Sadiq Ali Khan.
Hardoi, Lucknow and Unao districts. do. ..	Lieut. Shaikh Shahid Husain, O.B.E.
European	Sir Henry John Ludlam Stanyon, Kt., C.I.E., V.D.
Agra Landholders, South	Raja Ragho Prasad Narayan Singh.
Taluqdars	Raja Amarpal Singh, M.B.E., Raja Shambhu Dayal, Thakur Nawab Ali Khan, Thakur Jagan Nath Bakhsh Singh.
Upper India Chamber of Commerce	Sir Thomas Smith, Kt., V. D. Mr. Samuel Henry Taylor.
United Provinces Chamber of Commerce	B. Vikramjit Singh.

The Punjab.

The Punjab, or land of the five rivers, is so called from the five rivers by which it is enclosed, namely, the Jhelum, Chenab, Ravi, Beas and Sutlej. Together with the North-West Frontier Province and the Native State of Jammu and Kashmir which lie to the north, the Punjab occupies the extreme north-western corner of the Indian Empire, and with the exception of the above-mentioned province comprises all of British India north of Sind and Rajputana and west of the river Jumna. Previous to October 1912, the Punjab with its feudatories embraced an area of 136,330 square miles and a population at the Census of 1911 of 24,187,750 (inclusive of 28,587 transfrontier Baluchis) that is to say, about one-thirteenth of the area and population of the Indian Empire. But the formation of a separate province of Delhi reduced the area and population of the Punjab by about 450 square miles and 380,000 souls respectively. Of the total area of the Punjab, 36,551 square miles are in Native States (34 in number) with a population of 4,212,794, and 2,566 square miles are tribal territory on the western border of Dera Ghazi Khan district with a population of 28,587.

Physical Features.

The greater part of the Punjab consists of one vast alluvial plain, stretching from the Jumna in the east to the Suleman Range in the west. The north-east is occupied by a section of the Himalayas and the Salt Range forms its north-western angle. A few small spurs of the Aravalli mountain system traverse the extreme south-east and terminate in the Ridge at Delhi. The Punjab may be divided into five natural divisions. The Himalayan tract includes an area of 22,000 square miles, with a scanty population living scattered in tiny mountain hamlets. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum and part of Shahpur district. Its physical configuration is broken and confused and the mountainous tracts of Murree and Kahuta approximate closely in characteristics to the Himalayan tract. Except in the hills, the rainfall leaves little margin for protection against distress in unfavourable seasons and irrigation is almost unknown. Skirting the base of the hills and including the low range of the Siwaliks, runs the narrow sub-montane tract. This tract, secure in an ample rainfall, and traversed by streams from the hills, comprises some of the most fertile and thickly populated portions of the province. Its population of over four millions is almost wholly agricultural and pastoral but it includes one large town in Sialkot. Of the plains of the Punjab, the eastern portion covers an area of some 36,000 square miles with a population of 10½ millions. East of Lahore, the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, but over the greater part of the area the margin is so slight that, except where irrigation is employed, any material reduction in the rainfall involves distress, if not actual famine. Within the eastern plains lie the large cities of Lahore and Amritsar, and the population in comparison with the western Punjab is largely urban. The western plains cover an area of 59,000 square miles, with a population of a little over six millions. The rainfall in this area, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river-banks left moist by the retreating floods. In this very circumstance, these tracts find their scarcity against famine, for there cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass. So little rain is sufficient, and absolute drought occurs so seldom that the crops may be said never to fail from this cause. The western plains embrace the great colony areas on the Lower Chenab and Lower Jhelum Canals which now challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan and Lyallpur are the largest towns in the western area. Owing to its geographical position, its scanty rainfall and cloudless skies, and perhaps to its wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than any other portion of India. The summer, from April to September, is scorchingly hot, and in the winter, sharp frosts are common. But the bright sun and invigorating air make the climate of the Punjab in the cold weather almost ideal.

The People.

Of the population roughly one half is Mahomedan, three-eighths Hindu and one-eighth Sikh. Socially the landed classes stand high and of these the Jats, numbering nearly five millions, are the most important. Roughly speaking, one half the Jats are Mahomedan, one-third Sikh and one-sixth Hindu. In distribution they are ubiquitous and are equally divided over the five divisions of the province. Next in importance come the Rajputs, who number over a million and a half. The majority of them are Mahomedans by religion, about a fourth are Hindus and a very few Sikhs. They are widely distributed over the province. Both Jats and Rajputs of the Punjab provide many of the best recruits for the Indian Army. In fact all the agricultural classes of the Punjab, except in the south-western districts, made a magnificent response to the appeal for recruits in the great war and the province's contribution of upwards of 400,000 men to the main power of the Empire speaks for itself. The Gujars are an important agricultural and pastoral tribe, chiefly found in the eastern half of the province and in the extreme north-west. In organisation they closely resemble the Jats and are often absorbed into that tribe. There are many minor agricultural tribes, priestly and religious castes (Brahmans, Sayads and Kureshis), most of whom are landholders, the trading castes of the Hindus (Khatris, Aroras and Banias) and trading castes of the Mahomedans (Khojas, Parachas and Khakhas), and the numerous artisan and menial castes. There are also vagrant and criminal tribes, and foreign elements in the population are represented by the Baluchis of Dera Ghazi Khan and neighbouring

districts in the west, who number about half a million and maintain their tribal system, and the Pathans of the Attock and Mianwali districts. Pathans are also found scattered all over the province engaged in horse-dealing, labour and trade. A small Tibetan element is found in the Himalayan districts.

Languages.

The main language of the province is Punjabi, which is spoken by more than half the population. Western Punjabi may be classed as a separate language, sometimes called Lahndi, and is spoken in the north and west. The next most important languages are Western Hindi, which includes Hindustani, Urdu (the polished language of the towns) and other Hindi; Western Pahari, which is spoken in the hill tracts; and Rajasthani, the language of Rajputana. Baluchi, Pushto, Sindhi and Tibeto-Burman languages are used by small proportions of the population.

Agriculture.

Agriculture is the staple industry of the province, affording the main means of subsistence to 56 per cent. of the population. It is essentially a country of peasant proprietors. About one-sixth of the total area in British districts is Government property, the remaining five-sixths belonging to private owners. But a large part of the Government land is so situated that it cannot be brought under cultivation without extensive irrigation. Thus the Lower Chenab Canal irrigates nearly 1,900,000 acres of what was formerly waste land and the Lower Jhelum Canal, 390,000 acres, and the Lower Bari Doab Canal, when the colonisation scheme is completed, will add 1,200,000 acres to this total. Large areas in the hills and elsewhere which are unsuited to cultivation are preserved as forest lands, the total extent of which is about 8,700 square miles. Of the crops grown, wheat is the most important and the development of irrigation has led to a great expansion of the wheat area, which now occupies in an average year over 8½ millions of acres. The average annual outturn of wheat is 3,000,000 tons, valued at present prices at approximately £20,000,000. Next in importance to wheat is gram, the average annual produce of which is a million tons valued at £5,000,000. Other important staples are barley, rice, millets, maize, oilseeds (rape, toria and sesamum), cotton and sugarcane. Cotton is grown generally throughout the province but the ravages of boll-worm have affected the popularity of the crop. The cotton grown is of the short stapled variety, known as 'Bengals'. The country being preponderantly agricultural, a considerable proportion of the wealth of the people lies in its live-stock. The latest cattle census gives the following figures:—cattle, nearly 8,000,000 head: buffaloes, about 850,000; bovine young stock, 3,800 000; sheep, 4,500,000, goats, 4,250,000. Large profits are derived from the cattle and dairy trades and wool is a staple product in the south-west in Kulu and Kangra and throughout the plains generally. The production of hides and skins is also an important industry.

Industries.

The mineral wealth of the Punjab is small, rock salt, saltpetre, and limestone for road-building being the most important products. There are some small coal mines in the Jhelum district, with an output of about 50,000 tons a year, and gold-washing is carried on in most of the rivers, not without remunerative results. Iron and copper ores are plentiful but difficulties of carriage and the absence of fuel have hitherto prevented smelting on a large scale. The Punjab is not a large manufacturing country, the total number of factories being only 184, the majority of which are devoted to cotton ginning, cleaning and pressing. Cotton weaving as a domestic industry is carried on by means of hand looms in nearly every village. The Salvation Army has shown considerable enterprise in improving the hand-weaving industry. Blankets and woollen rugs are also produced in considerable quantities and the carpets of Amritsar are famous. Silk-weaving is also carried on and the workers in gold, silver, brass, copper and earthenware are fairly numerous and ivory carving is carried on at Amritsar and Patiala.

Administration.

Prior to the passing of the Indian Reform Act of 1919 the system of administration was that of a Lieutenant-Governor, drawn from the ranks of the Indian Civil Service. Under that Act the Province was raised to the status of a Governorship, with an Executive Council and Ministers, the Governor in Council being in charge of the Reserved Subjects and the Governor with his Ministers of the Transferred Subjects. The general system of provincial administration under this scheme is sketched in the section Provincial Governments (*q. v.*) where is also given a list of the Reserved and Transferred Subjects. Associated with the Governor and the Council and Ministers is an enlarged Legislative Council, with wide powers, whose scope and authority are given under the Legislative Councils (*q. v.*), the system being common to all the major Provinces. The Punjab Commission, the body which is responsible for the Civil administration of the province, is recruited from the Indian Civil Service and the Provincial Civil Service. Up to the date of the separation of the North-West Frontier Province from the Punjab, one-fourth of the cadre was drawn from the Indian Army. The business of Government is carried on through the usual Secretariat which consists of three Secretaries, designated (1) Chief, (2) Revenue and (3) Financial Secretaries, and three Under-Secretaries. There is also at present an Additional Secretary. In the Public Works Department, there are also three Secretaries (Chief Engineers), one in the Buildings and Roads Branch and two in the Irrigation Branch. The heads of the Police and Educational Departments are also Under-Secretaries to Government. The Government spends the winter in Lahore and the summer (from the middle of May to the middle of October) in Simla. Under the Governor, the province is administered by five Commissioners (for Ambala, Jullunder, Lahore, Rawalpindi and Multan) who exercise general control over the

Deputy Commissioners—29 in number—each of whom is in charge of a district. A district on an average contains four tahsils, each consisting of about 300 villages. The Deputy Commissioner is usually a Covenanted Civilian or military member of the Punjab Commission, although five Deputy Commissionerships are "listed" for Provincial Civil Servants. The Deputy Commissioner has under him one or more Assistant Commissioners (Covenanted Civilians) and one or more Extra Assistant Commissioners (Provincial Civilians). In some cases, one or more tahsils form a subdivision under the charge of a sub-divisional officer who has wide powers. The tahsil is in charge of a Tahsildar, in some cases assisted by one or more Naib Tahsildars. The village is under a Lambardar or headman and in most districts the villages are grouped into zails, each under a zaildar. The lambardars and zaildars are "village officers" and not Government-servants. The district Land Records and Excise staff, though organised for special departmental purposes, is available for general administrative work. The Native States of the province are arranged for the purposes of supervision into five groups, each under the charge of a Political Agent. Except in the case of the Sikh Phulkian States (Patiala, Jhind and Nabha) and the Bahawalpur Agency, the Political Agent is either the neighbouring Commissioner or Deputy Commissioner. The principal heads of Department in the province are the two Financial Commissioners (who are the highest Court of Revenue jurisdiction, and heads of the departments of Land and Separate Revenue and of Agriculture and the Court of Wards), the three Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration, the Registrar of Co-operative Credit Societies and Joint Stock Companies and the Legal Remembrancer. The Accountant-General, the Postmaster-General, the Director of Telegraph Engineering, and the Agent, North-Western Railway, represent Imperial Departments under the Government of India.

Justice.

The administration of justice is entrusted to a High Court, which is the final appellate authority in civil and criminal cases, and has powers of original criminal jurisdiction in cases where European British subjects are charged with serious offences and original civil jurisdiction in special cases. The Court sits at Lahore and is composed of a Chief Justice and six puisne judges (either Civilians or barristers), and an eighth additional judge. The conversion of the old Chief Court into a High Court which had first been mooted as long ago as 1886 and was sanctioned by the Secretary of State in 1916, could not take effect until the war was over and was finally brought into force on April 1, 1919. Subordinate to the High Court are the District and Sessions Judge (22 in number) each of whom exercises civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. They hear most of the first appeals in Civil suits and try sessions cases and hear criminal appeals from the district and first class magistrates. One or two divisions have an additional judge and in many districts a Subordinate Judge exercising unlimited civil jurisdiction, is appointed to assist the District Judge but the majority of civil suits are tried in the first instance by Munsifs whose jurisdiction is limited to suits not exceeding Rs. 1,000 in value. The assistants to Deputy Commissioners are always invested with the powers of a Munsif, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued. At Lahore, Amritsar and Simla there are Courts of Small Causes. The Deputy Commissioner is the District Magistrate and controls the subordinate Criminal Courts of the District. All the assistants of the Deputy Commissioner as well as the District and Subordinate Judges, but not the Munsifs, are invested with magisterial powers. Tahsildars usually exercise the powers of a second class magistrate and Naib Tahsildars those of the third class, and considerable assistance is obtained from Honorary Magistrates who sit either singly or as a bench. In districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner on the finding of a Council of Elder (Jirga) may pass sentence up to four years' imprisonment. In all cases capital sentences require the confirmation of the Chief Court. Special Revenue Courts to decide all suits regarding tenant right, rents and cognate matters in which civil courts have no jurisdiction have been established under the Punjab Tenancy Act. The Financial Commissioners are the final court of appeal in revenue cases.

Local Government.

Local control over certain branches of the administration is secured by the constitution of district boards exercising authority over a district and of municipalities exercising authority over a city or town. A few districts have local boards which exercise authority over a tahsil. These bodies are composed of members either nominated by Government or elected by the people and they are empowered to spend the funds at their disposal on schools and dispensaries, vaccination, sanitation, roads and rest houses and general improvements. The funds of district boards are derived mainly from a cess on the land revenue of the district supplemented by grants from Provincial Funds, and those of municipalities from octroi, local taxation and Government grants. In the smaller towns which are known as "notified areas", a simpler form of government than the municipal system is in force. Where the elective principle is in force as regards both district boards and municipalities, the public shows very little interest in the elections, except in a few cases where sectarian feeling runs high.

Finance.

The system of provincial finance also underwent a radical change under the Reform Act. Prior to the passing of that measure certain heads of revenue were reserved to the Government of India, others were made over entirely to the Provinces, others were "divided" between the Government of India and the

Provinces, the provinces in this way contributing to the cost of the central government. The Reform Act swept this system away. Certain heads of revenue were reserved to the Government of India; the rest were made over entirely to the Provinces, subject to a contribution fixed in each case to the expenses of the central government. These financial provisions, with the Punjab contribution, are described in detail in the section The Provincial Governments (*q. v.*)

Public Works.

As was stated in the section on "Administration" the Public Works Department is divided into two branches, one for Buildings and Roads and the other for Irrigation. In the former branch, under the Chief Engineer, the province is divided into three circles under Superintending Engineers and 11 divisions under Executive Engineers. The primary object of this branch is the construction and maintenance of Imperial and Provincial works, but it also assists municipalities and district boards. The Irrigation branch is under two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Under them are nine Superintending Engineers in charge of circles and 39 Executive Engineers in charge of divisions. In addition to the work of construction and maintenance Irrigation Officers are responsible for the assessment of water rates leviable on irrigated areas and in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops as well.

Irrigation.

The canal system of the Punjab is admittedly one of the greatest achievements of British rule in India. Not including the enormous Triple Canal project recently completed, the total irrigated area in British districts and Native States amounts to 8,269,233 acres. The Beas is the only one of the great rivers of the province from which no canal takes off. The Indus provides supplies for two large series of inundation canals, one on either bank. Taking off from the Jhelum is the Lower Jhelum perennial canal, with 150 miles of main channel and 1,000 miles of distributaries and lower down the river is a large series of inundation canals. The Lower Chenab perennial canal takes off from the Chenab and comprises 427 miles of main channel and 2,278 miles of branches, while below the junction of the Chenab and Ravi rivers is a series of inundation canals on both banks. The Ravi provides supplies for the Upper Bari Doab Canal, which has 370 miles of main line and branches and 1,571 miles of distributaries. Some small inundation canals and the Sidhani system with a length of 200 miles also take off from the Ravi. The Sirhind Canal, which has a main line and branches of 538 miles and distributaries amounting to 3,703 miles, takes off from the Sutlej, and there are two systems of inundation canals deriving their supplies from the Upper and Lower Sutlej respectively in addition to the Grey Canals maintained on the co-operative system in the Ferozepore district and a vast series of inundation canals in Bahawalpur State. The Western Jumna Canal, which takes off from the right bank of the Jumna, has a main line and branches of 377 miles and distributaries of 1,764 miles. The Triple Canal project is intended to carry surplus water from the Jhelum and the Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass. The three canals included in the scheme are known as the Upper Jhelum, Upper Chenab and Lower Bari Doab Canals. Of these the Upper Chenab was opened in April 1912 and the Lower Bari Doab in April 1913 and the Upper Jhelum in December 1915. The most interesting feature of this great work is the level crossing at Balloki, 40 miles from Lahore, where the Upper Chenab canal supply is passed across the Ravi into the Lower Bari Doab Canal.

Police.

The Police force is divided into District and Railway Police. The combined force is under the control of the Inspector-General, who is a member of the gazetted force and has under him three Deputy Inspectors-General, and a fourth Deputy Inspector-General in charge of Criminal Investigation, the Police Training School and Finger Print Bureau at Phillaur. The Railway Police are divided into two districts, Northern and Southern, under an Assistant Inspector-General. The District Police are controlled by Superintendents, each of whom is in charge of a district, and has under him one or more Assistant Superintendents. The district is divided into circles under charge of Inspectors, and again into thanas in charge of a Sub-Inspector. The staff of a thana consists on an average of one Sub-Inspector, two head constables and 10 constables. A service of Provincial Police officers has also been established consisting of 18 Deputy Superintendents, who are employed as assistants to the Superintendents. The total police force of the province exclusive of gazetted officers, consists of 980 officers and about 20,000 men, practically half of whom are armed with revolvers and bored out rifles. The village police or chaukidars are under the control of the Deputy Commissioner of each district not of the Police Superintendent.

Education.

Although the Punjab is usually considered rather a backward province, education has made great strides especially in the last ten years. Government maintain the Government College at Lahore, the Central Training College at Lahore, a Training Class for European teachers at Sanawar (Simla Hills), normal schools at the headquarters of each division, and High Schools at the headquarters of each district, and the Lawrence Military Asylum at Sanawar for European children. Two more Government Colleges, at Ambala and Multan, are in contemplation. There are in the province nine arts colleges (one of them Oriental), 6 professional colleges

for males and 1 for females; 130 High Schools for boys and 18 for girls; 241 middle schools for boys and 43 for girls; 6,492 Primary Schools for boys and 855 for girls; 54 schools for special instruction for boys and 12 for girls. The number of pupils attending schools of all classes, both male and female, is 563,154. The nine arts colleges are:—The Government, Oriental, Forman Christian, Dayanand, Islamia and Dayal Singh Colleges at Lahore; Khalsa, Amritsar; Murray, Sialkote; Gordon, Rawalpindi. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, the Clerical and Commercial School at Amritsar, the Engineering School at Rasul, the Mayo School of Art and the Railway Technical School, both at Lahore. There are eight Industrial Schools in the Province maintained by Municipalities or District Boards and others maintained by Missionary bodies, the Arya Samaj, etc., which receive grants-in-aid. The education of the domiciled community is provided for by a number of secondary boarding schools in hill stations and of primary schools in the plains. The aristocracy of the province is provided for by the Aitchison Chiefs' College for boys and the Queen Mary's College for girls, both at Lahore.

The Education Department is administered by the Director of Public Instruction, who has under him an Inspector of Schools in each civil division an Assistant Director, with two or more assistants, a District Inspector, with assistants, in each district, two Inspectresses of girls' schools and an Inspector of European schools. Higher education is controlled by the Punjab University (incorporated in 1882) which has the Lieuteuant-Governor as *ex-officio* Chancellor, a Vice-Chancellor appointed by Government and a Senate. In addition to the nine arts colleges already mentioned and the Law and Medical Colleges at Lahore, St. Stephen's College, Delhi, and the Hindu College, Delhi, and six other colleges in Kashmir, Patiala, Bahawalpur, Kapurthala and the North-West Frontier Province are affiliated to the Punjab University.

Medical.

The Medical Department is controlled by the Inspector-General of Civil Hospitals (a member of the Indian Medical Service) who also supervises the departments of the Chief Plague Medical Officer and the Chief Malaria Medical Officer. Sanitation is controlled by the Sanitary Commissioner (also a member of the Indian Medical Service) who has under him two Deputy Sanitary Commissioners and is advised by the Sanitary Board, with the Sanitary Engineer as Technical Adviser. Medical work in the districts is in charge of the Civil Surgeons, of whom fourteen before the War were members of the Indian Medical Service and others Military Assistant Surgeons and uncovenanted Medical Officers, chiefly Civil Assistant Surgeons. The Mayo Hospital at Lahore and special railway, canal and police hospitals are maintained by Government, but the ordinary hospitals and dispensaries in the districts are maintained by municipal or district funds. Certain private institutions such as the Walker Hospital at Sialra and many mission dispensaries receive grants-in-aid. The Mayo Hospital at Lahore has been greatly extended and improved as a memorial to King Edward VII, and was formally opened by Lord Hardinge in December 1915. The total number of patients treated at all hospitals and dispensaries in the year is over four and a half millions, including nearly 75,000 in-patients. A temporary department to combat plague has been organised under the Chief Medical Plague Officer. In the districts the Civil Surgeons are generally in charge of the operations against plague, but additional officers are employed from time to time. There is only one lunatic asylum in the Province at Lahore, but there are ten leper asylums. The Pasteur Institute at Kasauli performs the functions of a provincial laboratory for the Punjab. Vaccination is supervised by the Sanitary Commissioner, but is more particularly the concern of the Deputy Sanitary Commissioner, who has under him a special staff. Civil Surgeons also have a local staff of vaccinators under them.

Administration.

Governor, Sir Edward Maclagan, K.C.I.E., C.S.I. I.C.S.

PERSONAL STAFF.

Private Secretary, Major G. C. S. Black, O.B.E.

Aide-de-Camp, Capt. K. O'Brien Harding, O.B.E.

Honorary Aides-de-Camp, Hon. Lieut. Risaldar Major Amar Singh Bahadur, Subedar-Major Feroz Khan Bahadur and Subedar Sainbir Gurung, Bahadur, I.O.M.

MEMBERS OF COUNCIL.

The Hon. Sir John Maynard.

The Hon. Sardar Bahadur Sardar Sunder Singh Majithia.

MINISTERS.

Khan Bahadur Mian Fazal Hussain

Lala Harkisan Lal.

SECRETARIAT.

Chief Secretary, J. P. Thompson, I.C.S.

Revenue Secretary J. D. Boyd, I.C.S.

Financial Secretary, B. T. Gibson, I.C.S.

PUBLIC WORKS DEPARTMENT

Irrigation Branch

Secretaries, F. W. Woods; H. W. M. Ives, A.M.I.C.E.

Buildings and Roads Branch.

Secretary, A. S. Montgomery.

REVENUE DEPARTMENT.

Financial Commissioner, P. J. Fagan, I.C.S.

Director of Industries, E. A. Scott, O.B.E.

Director of Agriculture, C. A. H. Townsend

Director of Land Records, Inspector-Genl. of Registration, and Registrar-General, D. J. Boyd

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, G. Anderson.

Inspector-General of Police, A. C. Stewart.

Inspector-General of Registration, Shaikh Rahim Bakhsh.

Conservator of Forests, J. W. A. Grieve.

Inspector-General of Civil Hospitals, Colonel Robert Charles Macwatt, C.I.E., I.M.S.

Sanitary Commissioner, Lt.-Col. S. B. Smith, C.M.G., I.M.S.

Inspector-General of Prisons, Lt.-Col. E. L. Ward.

Accountant-General, F. D. Gordon, M.A.

Postmaster-General, H. N. Hutchinson, O.B.E., I.C.S.

LIEUTENANT GOVERNORS OF THE PUNJAB.

Sir John Lawrence, Bart., G.C.B.	1859
Sir Robert Montgomery, K.C.B.	1859
Donald Friell McLeod, C.B.	1865
Major-General Sir Henry Durand, K.C.S.I., C.B., died at Tonk, January 1871.	1870
R. H. Davies, C.S.I.	1871
R. E. Egerton, C.S.I.	1877
Sir Charles U. Aitchison, K.C.S.I., C.I.E.	1882
James Broadwood Lyall	1887
Sir Dennis Fitzpatrick, K.C.S.I.	1892
William Mackworth Young, C.S.I. ..	1897
Sir C. M. Rivaz, K.C.S.I.	1902
Sir D. C. J. Ibbetson, K.C.S.I., resigned 22nd January 1908.	1907
T. G. Walker, C.S.I. (offg.)	1907
Sir Louis W. Dane, K.C.I.E., C.S.I. ..	1908
James McCrone Doule (offg.)	1911
Sir M. F. O'Dwyer, K.C.S.I.	1913
Sir Edward Maclagan, K.C.I.E., C.S.I. ..	1918

GOVERNOR OF THE PUNJAB.

Sir Edward Maclagan, K.C.I.E., C.S.I. ..	1920

PUNJAB LEGISLATIVE COUNCIL.

The Hon'ble Mr. M. S. D. Butler, C.B., C.I.E., C.V.O., C.B.E., President of Council
The Hon'ble Sir John Maynard, K.C.I.E.
The Hon'ble Sardar Bahadur Sardar Sundar Singh, Majithia, C.I.E.
The Hon'ble Mr. Fazl-i-Hussain.
The Hon'ble Mr. Harkishen Lal.
Khan Bahadur Mian Abdul Hamid, O.B.E., of Kapurthala.

Ahmad Yar Khan, Daultana, Mian Luddan ..	Multan East (Muhammadan), Rural.
Akhbar Ali, Pir, Vakil, Ferozepore	Ferozepore (Muhammadan), Rural.
Ali Akbar, Chaudhri, Dhamri, Gurdaspur ..	Kangra-cum-Gurdaspur (Muhammadan), Rural.
Ali Haidar Shah, Pir, Sang Jani	Rawalpindi (Muhammadan), Rural.
Allan Khan, Drishak, Sardar, Asani	Dera Ghazi Khan (Muhammadan), Rural.
Anderson, Mr., G.C.I.E.	Official, nominated.
Amar Das, Lala, Vakil, Sialkot	Rawalpindi Division and Lahore Division North (Non-Muhammadan), Rural.
Amir Khan, Khan Sahib, Chak No. 282, Gugera Branch.	Lyallpur North (Muhammadan), Rural.
Asgar Ali, Sheikh, I.C.S.	Official, nominated.
Ata Ullah Khan, Chaudhri, Kaulu Tarar, Hafizabad.	Gujranwala (Muhammadan), Rural.
Atma Ram, Lala, Sirsa	South-East Towns (Non-Muhammadan), Urban.
Bakhtawar Singh, Sardar, Kathgarh	Hoshiarpur and Kangra (Sikh), Rural.
Balbir Singh, 2nd-Lieutenant, Rao Bahadur, O.B.E., Gokalpur.	Gurgaon (Non-Muhammadan), Rural.
Balwant Singh, Sardar, Moran	Jullundur (Sikh), Rural.
Bans Gopal, Chaudhri, Phader, Karnal	Karnal (Non-Muhammadan), Rural.
Beli Ram, Mian, Hoshiarpur	Hoshiarpur (Non-Muhammadan), Rural.
Bhiwani Shankar, Pandit, Amritsar	Amritsar City (Non-Muhammadan), Urban.
Boyd, Mr. D. J., I.C.S.	Official, nominated.
Dasundha Singh, Sardar, Pleader, Ludhiana ..	Ludhiana (Sikh), Rural.
Daulat Ram, Kalia, Pandit, M.B.E., Ferozepore..	East and West Central Towns (Non-Muhammadan), Urban.
Daya Ram, Chaudhri, Bar.-at-Law, Ambala ..	Ambala-cum-Simla (Non-Muhammadan), Rural.
Dilbagh Singh, Sardar Sahib, Risaldar, Chak No. 66, Gugera Branch.	Lyallpur (Sikh), Rural.
Edward Earnest Clarke, Mr. Lahore	Punjab Chamber of Commerce and Trades Association, Commerce.
Fagan, Mr. P. J., C.S.I., I.C.S.	Official, nominated.
Fazl Ali, Chaudhri, Khan Sahib, M.B.E., Ajnala	Gujrat West (Muhammadan), Rural.
Firoz Khan, Malik, Nurpur Nun	Shahpur West (Muhammadan), Rural.
French, Mr. L., C.I.E., C.B.E., I.C.S.	Official, nominated.
Ganpat Rai, Mr., Lahore	Lahore and Ferozepur-cum-Sheikhupura (Non-Muhammadan), Rural.
Gibson, Mr. B. T., I.C.S.	Official, nominated.
Ghulam Muhammad Shah, Saiyad, Jahanian Shah.	Shahpur East (Muhammadan), Rural.
Ghulam Muhammad, Chaudhri, Parian Wali ..	Gujrat East (Muhammadan), Urban.
Sardar Sahib Sardar Gopal Singh, Labana of Gopal Singh Wala, Lahore.	
Capt. Sardar Gopal Singh, O.B.E., of Bhagowal, Gurdaspur.	
Hallifax, Mr. C. J., C.B.E., I.C.S...	Official, nominated.
Hara Singh, Bedi, Bawa, Honorary Extra Assistant Commissioner, Nanakpur.	Multan Division and Sheikhupura (Sikh), Rural.
Hari Chand, Rai Bahadur, Multan	West Punjab Towns (Non-Muhammadan), Urban.
Hardit Singh, Bedi, Bawa, Montgomery ..	Sikh Landholders, Landholders.

Harnam Singh, Rai Sahib, Rawalpindi	Rawalpindi Division and Gujranwala (Sikh), Rural.
Hussain Shah, Saiyad, Rajoa	Jhang (Muhammadan), Rural.
Ives, Mr. H. W. M., C.I.E., M.I.C.E.	Official, nominated.
Jamal Kahn, Sardar, Leghari Tumandar, Dera-Ghazi Khan.	Baloch Tumandar, Landholders.
Joseph, Mr. E. A., I.C.S.	Official, nominated.
Karim Ullah Khan, Malik, Darapur	Jhelum (Muhammadan), Rural.
Kartar Singh, Sardar, Vakil, Ferozepore	Ferozepore (Sikh), Rural.
Kharak Singh, Chaudhri, Raipur	Amritsar-cum-Gurdaspur, Rural.
Kundan Lal Rallia Ram, Mr.	Representative of Indian Christians.
Lajpat Rai, Chaudhri, Rai Sahib, Hansi ..	Hissar (Non-Muhammadan), Rural.
Lal Chand, Chaudhri, Rao Bahadur, O.B.E., Rohtak.	North-West Rohtak (Non-Muhammadan), Rural.
Macpherson, Mr. W. R.	Representative of European and Anglo-Indian Communities.
MacWatt, Colonel R. C, I.M.S.	Official, nominated.
Mahabat Khan, Malik, Karkan	Sheikhupura (Muhammadan), Rural.
Mahtab Singh, Sardar Bahadur, Lahore	(Sikh) Urban.
Manohar Lal, Mr., Bar-at-Law, Lahore	Punjab University, University.
Mehdi Shah, Saiyad, Khan Bahadur, O.B.E., Gojra.	Lyallpur South (Muhammadan), Rural.
Mela Ram, Misr, Nokodar	Jullundur-cum-Ludhiana (Non-Muhammadan), Rural.
Mir Muhammad Khan, Khan Bahadur, Vakil, Simla.	South-East Towns (Muhammadan), Urban.
Moti Lal, Kaistha, Mr., Dharmsalal	Kangra (Non-Muhammadan), Rural.
Muhammad Adbulla Khan, Khan, Khangarh ..	Muzaffargarh (Muhammadan), Rural.
Muhammad Akbar Khan, Khan Bahadur, Jhelum.	West Punjab Towns (Muhammadan), Urban.
Muhammad Amin, Chaudhri, Pleader, Sialkot ..	Sialkot (Muhammadan), Rural.
Muhammad Hayat Khan, Chaudhri, Ranhera ..	Gurgaon-cum-Hissar (Muhammadan), Rural.
Muhammad Hussain, Saiyad, Shergarh	Montgomery (Muhammadan), Rural.
Muhammad Jamil Khan, Chaudhri, Bahram ..	Jullundur (Muhammadan), Rural.
Muhammad Raza Shah, Gilani Sayad, Multan ..	Multan West (Muhammadan), Rural.
Muhammad Saif Ullah Khan, Khan, Isa Khel ..	Mianwali (Muhammadan), Rural.
Muhammad Shah Nawaz, Mian, Bar.-at-Law, Lahore.	Lahore (Muhammadan), Rural.
Muharam Ali, Chishti, Maulvi, Vakil, Lahore ..	Lahore City (Muhammadan), Urban.
Nabi Bakhsh, Chaudhri, Fatehpur	Amritsar (Muhammadan), Rural.
Narendra Nath, Diwan Bahadur, Raja, Lahore ..	Punjab Landholders (General), Landholders.
Nawab Din, Mr., Bar.-at-Law, Sailkot	East and West Central Towns.
Owen, Dr. C. A., Lahore	Nominated to represent Anglo-Indian Community.
Panna Lal, Rai Sahib, Ambala Cantonment ..	North-East Towns (Non-Muhammadan), Urban.
Raghbir Singh, Hony. Lieut., Sardar, O.B.E., Raja Sansi.	Amritsar (Sikh), Rural.
Raja Singh, Chaudhri, Rai Sahib, Jatwar ..	Ambala Division (Sikh), Rural.
Randhir Singh, Sardar, Kalaswala, Sialkot District.	Sialkot-cum-Gurdaspur (Sikh), Rural.
Sangat Singh, Sardar, Kulla	Lahore (Sikh), Rural.
Sarup Singh, Rai Bahadur, Risaldar, Badli ..	South-East Rohtak (Non-Muhammadan), Rural.
Scott, Mr. E. A., O.B.E	Official, nominated.
Sewak Ram, Lala, Rai Bahadur, Gangapur ..	Multan Division (Non-Muhammadan), Rural.
Shafi Ali Khan, Chaudhri, Khan Sahib, Gohana ..	Ambala Division (North-East).
Sikandar Hayat Khan, Lieut., M.B.E., Wah ..	Attock (Muhammadan), Rural.
Thakar Das, Rai Sahib, Pind Dadan Khan ..	North-West Towns (Non-Muhammadan), Urban.
Townsend, Mr. C. H., I.C.S.	Official, nominated.
Wali Muhammad Khan, Khan Bahadur Rai, Talwandi Rai, Ludhiana District.	Hoshiarpur-cum-Ludhiana, Rural.
Yusaf Shah, Khwaja, Khan Bahadur, C.I.E., Amritsar.	Amritsar City (Muhammadan), Urban.
Ellis, Mr. T. P., O.B.E., I.C.S.	Secretary to Council.
Lala Uttam Chand, Anarkali, Lahore	Lahore City (Non-Muhammadan).

Burma.

The Province of Burma lies between Assam on the North-West and China on the North-East, and between the Bay of Bengal on the West and South-West and Siam on the South-East. Its area, including the district of Putao constituted in February 1914, is approximately 270,000 square miles, of which 172,000 are under direct British Administration, 31,000 belong to independent and 67,000 to semi-independent Native States. The main geographical feature of the country is the series of rivers and hills running fan-like from North to South with fertile valleys in between, widening and flattening out as they approach the Delta. Differences of elevation and rainfall produce great variations in climate. The coastal tracts of Arakan and Tenasserim have a rainfall of about 200 inches, the Delta less than half that amount. The hot season is short and the monsoon breaks early. The maximum shade temperature is about 96°, the minimum about 60°. North of the Delta the rainfall decreases rapidly to 30 inches in the central dry zone which lies in a "rain shadow" and has a climate resembling that of Bihar. The maximum temperature is twenty degrees higher than in the wet zone, but this is compensated by a bracing cold season. To the north and east of the dry zone lie the Kachin hills and the Shan plateau. The average elevation of this tableland is 3,000 feet with peaks rising to 9,000. Consequently it enjoys a temperate climate with a rainfall of about 70 inches on the average. Its area is over 50,000 square miles. There is no other region of similar area in the Indian Empire so well adapted for European colonization. The magnificent rivers, the number of hilly ranges (Yomas) and the abundance of forests, all combine to make the scenery of Burma exceedingly varied and picturesque.

The People.

The total population of Burma at the census of 1921 was 13,205,564. In 1911 there were 7,642,201 Burmans, 996,420 Shans, 919,641 Karens, 239,953 Kachins, 306,486 Chins, 344,123 Arakanese and 320,629 Talaings. There is also a large alien population of 108,877 Chinese and about 600,000 Indians, while the European population was 24,355.

The Burmans, who form the bulk of the population, belong to the Tibetan group and their language to the Tibeto-Chinese family. They are essentially an agricultural people, 80 per cent. of the agriculture of the country being in their hands. The Burmese, and most of the hill tribes also, profess Buddhism, but Animism, or the worship of nature spirits, is almost universal. The interest taken by the Burmese in the course of the war, their response to the call for recruits and their generous contributions to war loans and charitable funds seem to show that their apathy towards the government of the country is giving way to an intelligent loyalty to British rule. But attempts are being made by the Indian Reform party to exploit this newly awakened interest in politics. In appearance the Burman is usually somewhat short and thick set with Mongolian features. His dress is most distinctive and exceedingly comfortable. It consists of a silk handkerchief bound round his forehead, a loose jacket on his body and a long skirt or loongi tied round his waist, reaching to his ankles. The Burman women, perhaps the most pleasing type of womanhood in the East, lead a free and open life, playing a large part in the household economy and in petty trading. Their dress is somewhat similar to the man's minus the silk kerchief on the head, and the loongyi is tucked in at the side instead of being tied in front. A well dressed and well groomed Burmese lady would, for grace and neatness, challenge comparison with any woman in the world.

Communications.

The Irrawaddy, and to a less extent the Chindwin, afford great natural thoroughfares to the country. At all seasons of the year these rivers, especially the Irrawaddy, are full of sailing and steam craft. In the Delta the net-work of waterways is indeed practically the only means of communication. The Irrawaddy Flotilla Company, with a fine fleet of mail, cargo and ferry boats, gives the Irrawaddy and the Delta rivers and creeks a splendid river service.

The Burma Railways Company has a length of 1,600 miles open line. The principal lines are from Rangoon to Mandalay; from Sagaing to Myitkyina, the most northern point in the system; the Rangoon-Prome line; and the Pegu-Martaban line, which serves Moulmein on the further bank of the Salween River. An important branch line runs from Thazi on the main line across the Meiktila and Myingyan Districts to Myingyan Town on the Irrawaddy. Another branch goes from Sagaing on the Irrawaddy to Alon on the Chindwin. A small branch on the Sagaing-Myitkyina line runs from Naba to Katha on the Irrawaddy. A branch on the right bank of the Irrawaddy runs from Bassein to Kyangin. A ferry at Henzada connects this branch with another branch running from Letpadan on the Prome line to the left bank of the Irrawaddy at Tharawaw. An important line, the Southern Shan States Railway, is open as far as Aungban, 7 miles beyond Kalaw, the future hill-station of the province, and 70 miles from Thazi, the junction with the Rangoon-Mandalay main line. The new line will end thirty miles further east at Yawnghwe, the principal town in the rich valley of the Nam Pilu. The Northern Shan States railway runs from Myohaung Junction, 3 miles south of Mandalay, to Lashio.

The length of metalled roads is nearly 2,000 miles and of unmetalled roads nearly 11,000. The number of roads is for a rich province like Burma quite inadequate. One of the most urgent needs of the Province is a very generous extension of roads both metalled and unmetalled. The newly-constituted Committee on Roads and Communications will no doubt effect rapid improvement when funds become available. The imperial grant of 50 lakhs spread over four or five years went a very little way towards making good deficiencies, and the proposal to provide funds by means of a tax on rice exports was not approved.

A revision of the Provincial settlement is urgently required. No arrangement can be satisfactory which does not recognize the claim of Burma, as a new and undeveloped country, to separate treatment. She is taxed far more highly than any other province and her surplus should be used to a far greater extent than hitherto for capital expenditure on development, and not swept into the Imperial coffers.

Industry.

Agriculture is the chief industry of the province and supports nearly three-fourths of the population. The nett total cropped area is 14½ million acres of which more than half a million acres are cropped twice. Irrigation works supply water to 1¾ million acres. The main supply water to 1¾ million acres. The Burma coastwise trade balance is invariably favourable, the exports exceeding the imports. Rangoon imported in 1920-21 cotton twist and yarn to the value of Rs. 2,81 lakhs and cotton piecegoods to the value of Rs 2,32 lakhs chiefly from Bombay and Calcutta; jute goods to the value of Rs. 1,92 lakhs and coal worth Rs 1,06 lakhs, almost entirely from Calcutta; grain and pulse worth Rs. 1,17 lakhs. In return Burma supplied India with 970,000 tons of rice to the value of nearly Rs 15¾ crores, as compared with 1,750,000 tons valued at Rs. 22¼ crores in 1919-20. India's purchases had been surprisingly low during the opening months of the year but when control of the inter-provincial rice trade was released in January 1921, the trade revived and by the end of the year Bombay (as usual the principal purchaser) had taken 512,000 tons, Bengal 254,000, and Madras 181,500. India is very largely dependent on Burma for her supplies of Kerosene, benzine and petrol which rank second to rice in order of importance India's purchases totalled 100 million gallons in 1920-21, as compared with 105 in 1919-20 and 117 in 1918-19. Teak wood was exported in large quantities from Burma to India where stocks were low early in the year. Bombay took 53,600 cubic tons in 1920-21 as compared with 24,500 in 1919-20, Bengal 47,600 as compared with 43,000 cubic tons in the previous year; and Madras 36,700 as compared with 32,000. The total value of the trade increased from Rs. 1,78 lakhs in 1919-20 to Rs. 2,76 lakhs in 1920-21.

Forests play an important part in the industrial life of the Province. The forest reserves cover nearly 30,000 square miles, while unclassed forests are estimated at about 110,000 square miles. Government extracts some 90,000 tons of teak annually, private firms, of whom the Bombay Burma Trading Corporation and Steel Brothers are the chief, extract over 276,000 tons. Other timber extracted by licensees amounts to nearly 400,000 tons and firewood 700,000 tons.

The war has given a great impetus to the exploitation of the mineral resources of the country and there has been a rapid increase in the number of mines. Wolfram and tin mines in Tenasserim have especially developed. Government has aided their development by the appointment of special officers, the importation of labour and the construction of roads. In 1918 wolfram was extracted to the amount of 4,442 tons valued at over a crore of rupees. Burma is the chief source of the world's supply of this important mineral. In the same year 100 tons of block tin and 732 tons of tin ore were produced. The value was nearly eighteen lakhs. Silver, lead and zinc are extracted by the Burma Mines Company at Badwin in the Northern Shan States, Copper in small quantities is also found there. No zinc has been won since 1916. There are small deposits of Molybdenite in Tavoy and Mergui and of platinum in Mytkyina. Antimony is found in large quantities in Amherst district in an area at present too difficult of access for profitable working. The output of precious stones from the ruby mines had declined since the war began. Gold dredging in the Myitkyina District has proved unprofitable and the company has been wound up. From the mines in the Hukong valley jade and amber worth nearly four lakhs were won. Next in importance for war purposes to wolfram and far exceeding it in commercial value is petroleum. The oldest and largest oil field in the province is at Yenangyaung in Magwe district where the Burma Oil Company has its chief wells. But borings in other districts have shown that the oil-bearing strata extend over the whole of the dry zone, and the output from the smaller fields in Myingyan, Pakokku and Minbu districts is now considerable, while the wells sunk in Thayetmyo and Prome districts are also showing satisfactory returns. Two-thirds of the total production comes from the Yenangyaung field, whence it is carried 300 miles in pipes to the oil refineries at Syriam on the Rangoon river. The revenue from minerals for the year was Rs. 419 lakhs.

The area under rubber is 60,000 acres. The plantations are young and as the trees come into bearing production increases rapidly. But the planting of new ground is not on a scale to meet the demands for rubber, and Government has endeavoured by free grants of suitable land to stimulate planting. On this as on other industries of Burma the mischievous activities of the company promoter during the great 'boom" cast a blight from which it is only just recovering. The bulk of the rubber is grown in Tenasserim division, but there are large plantations near Rangoon and in the wet zone of Upper Burma near Myitkyina.

Manufactures.

There are 536 factories, over three-fifths of which are engaged in milling rice and over one-fifth are sawmills. The remainder are chiefly cotton ginning mills, oil mills for the extraction of oil from groundnuts, and oil refineries connected with the petroleum industry. The average daily number of operatives is under 70,000 At the Census of 1911, 469,743 or only 6·6 of the total population were engaged outside agriculture and production.

As is the case in other parts of the Indian Empire, the imported and factory-made article is rapidly ousting the home-made and indigenous. But at Amarapura in the Mandalay District a revival has taken place of hand silk-weaving. Burmese wood-carving is still famous and many artists in silver still remain, the finish of whose

work is sometimes very fine. Bassein and Mandalay parasols are well known and much admired in Burma. But perhaps the most famous of all hand-made and indigenous industries is the lacquer work of Pagan with its delicate patterns in black, green and yellow traced on a ground-work of red lacquer over bamboo. A new art is the making of bronze figures. The artists have gone back to nature for their models, breaking away from the conventionalized forms into which their silver work had crystallized, and the new figures display a vigour and life that make them by far the finest examples of art the province can produce.

Trade.

The total value of the foreign trade in 1918-19 was 3,565 lakhs, an increase of 15 per cent. compared with the previous year but 424 lakhs below the returns for the best year before the war. Imports amounted to 1,059 lakhs or 7 per cent. more than in the previous year. Rangoon, the only port with facilities for distribution, took 85·74 per cent. of the foreign trade and 93·43 of the Indian trade. Indian trade rose from 2,340 lakhs in 1917-18 to 3,354 lakhs in 1918-19. The net customs duty was 191¼ lakhs or 15½ lakhs more than in 1917-18. The shortage of shipping and the enormous cost of freight continued to hamper trade. Articles of export required for war purposes, such as wolfram, rubber and cotton, with hides, timber, tobacco and oil, shew the chief increases. The exports of rice and paddy to foreign countries totalled 1,642,067 tons, or 8 per cent. more than in 1917-18, but still 14 per cent. below the returns for the best year before the war. Increase of prices accounts for a considerable part of the increase of total trade, but after allowances have been made for the inflation of prices it is clear that there was a great recovery during the year.

The most important item of merchandise imported into Rangoon is manufactured cotton, which accounts for 27 per cent. of the total import trade. These imports are valued at Rs. 236 lakhs. In 1918-19 the United Kingdom took 36.8 per cent. and the rest of the British Empire 26.7 per cent. of the total foreign trade of the province. Japan stands next with 17 per cent., nearly four times as much as her nearest competitor, the United States. Of the import trade alone Japan takes 23 per cent., United Kingdom 48.8 per cent., British Dominions 16 per cent., the whole of Europe 2 per cent. Japan has nearly doubled her total trade in the twelve months and imports alone from Japan are two and a quarter times as much as the average of the three years ending March 1917.

Administration.

Burma has not yet been brought within the provisions of the Government of India Act, 1919, but in December 1920 Mr. Montagu stated in the House of Commons that he hoped next session to introduce a Bill with the object of bringing Burma into the scheme of constitutional reform. He hoped that Parliament, at the beginning of next session, would agree to the appointment of a Joint Standing Committee on Indian Affairs, consisting of nine members of each House. He would not propose any member of the Government to serve on the Committee, while if the Bill passed the second reading he proposed to refer it to a committee. Consequently, it would be Parliament that would decide. The scheme of the Government of India and the Government of Burma would be referred to the Standing Committee along with the Bill if it passed the second reading. He hoped to be able to convince the Committee that the principles of the scheme, which had been applied not because they liked it, but because they thought it would be the best as a transitional measure for the other provinces of India, would be the best for Burma.

In 1897 the Province, which had formerly been administered by a Chief Commissioner, was raised to a Lieutenant-Governorship. The head of the Province is therefore now the Lieutenant-Governor. He has a Council of seventeen members, one of whom is elected by the Burma Chamber of Commerce, one by the Rangoon Trades Association and the remaining fifteen are nominated by the Lieutenant-Governor. Not more than seven members may be official; the rest must be non-officials, and at least four must be selected from the Burmese population, one from the Indian and one from the Chinese community.

Burma is divided administratively into Upper Burma (including the Shan States and Chin Hills) and Lower Burma. The Shan States are administered by the Chiefs of the States, subject to the supervision of the Superintendents in the case of the Northern and Southern Shan States, and to the supervision of the Commissioners of the adjoining Divisions in the case of the other States. The Civil, Criminal and Revenue administration is vested in the Chief of the State, subject to the restrictions contained in the sanad. The law administered is the customary law of the State.

The Chin Hills are administered by a Superintendent.

Under the Lieutenant-Governor are eight Commissioners of divisions, four in Upper and four in Lower Burma. Commissioners in Upper Burma and the Commissioner of the Arakan Division are ex-officio Sessions Judges, but the other three Commissioners have been relieved of all judicial work.

Under the Commissioners are 40 Deputy Commissioners in charge of districts including the Police officers in charge of the Hill Districts of Arakan and the Salween District, who exercise the powers of a Deputy Commissioner. Deputy Commissioners are also District Magistrates, Collectors, and Registrars, except in Rangoon, where there is both a District Magistrate and a Collector. Subordinate to the Deputy Commissioner are Assistant Commissioners, Extra Assistant Commissioners and township officers, called Myooks. In the villages are the village headmen, Thugyis, assisted in Lower Burma by the Seeingaungs (rural policemen in charge of ten houses). The revenue administration is controlled by a Financial Commissioner assisted by two Secretaries. Subordinate Departments are in charge of a Commissioner of

Settlements and Land Records, a Director of Agriculture, a Superintendent of the Civil Veterinary Department and a Registrar of Co-operative Credit Societies.

Justice.

The administration of Civil and Criminal Justice is under the control of the Chief Court of Lower Burma with five judges, and of the Judicial Commissioner, Upper Burma, with an Assistant Judicial Commissioner. There are seven Divisional and eight District Judges. There are also separate Provincial and Subordinate Judicial Services. Divisional Judges are also Sessions Judges. The Chief Court at Rangoon is the highest Civil Court of appeal and the highest court of Criminal appeal and revision in Lower Burma. It is also the High Court for the whole of Burma (including the Shan States) where European British subjects are concerned. It is the principal Civil and Criminal Court of original jurisdiction for Rangoon Town and hears appeals from all sentences of Courts and magistrates exercising jurisdiction in Rangoon Town.

In Criminal and Civil matters the Judicial Commissioner of Upper Burma exercises the power of a High Court for appeal, reference and revision, except in respect of criminal cases in which European British subjects are concerned.

All village headmen have limited magisterial powers and a considerable number are also invested with civil jurisdiction to a limited extent.

In pursuance of the policy of decentralization steps were taken in 1917 to restore to the village headmen the power and influence which they possessed in Burmese times before the centralizing tendencies of British rule made them practically subordinate officers of the administration.

Municipalities.

The Rangoon Municipality is the most important, with an income of Rs. 46·31 lakhs and an expenditure of Rs. 36·81 lakhs. The Chairman is a member of the Indian Civil Service of Deputy Commissioner's rank. The members of the Committee are elected by wards.

There are 44 minor Municipalities, of which the most important are those at Mandalay and Moulmein. The average incidence of Municipal taxation is Rs. 2-3-5 per head, but in Rangoon it reaches Rs. 12.

Local Funds.

No Local Boards or District Boards exist in Burma. But in Lower Burma there are District Cess Funds, derived mostly from a 10 per cent. cess on collections of ordinary local revenue and from collections from markets, ferries, slaughter houses, etc. The total receipts exceed Rs. 38 lakhs.

In Upper Burma there are District Funds. They are derived from market, ferry and license fees and occasional grants from Provincial revenues. The total revenue exceeds Rs. 12 lakhs.

There are 7 Cantonment Funds, 22 Town Funds and, excluding the Rangoon Port Trust, 6 Port Funds.

Finance.

In Burma, as in other Provinces, the finances are based on a "Provincial Settlement," which came into force on the 1st April 1907. The Government of India retains in the first place the entire profits of the commercial departments, such as Posts and Telegraphs, and in the second place, all the revenue where the 'locale' is no guide to its true incidence, such as the net receipts from Customs, Salt and Opium. But as the income from these sources is inadequate for the purpose of meeting the cost of the Imperial Services, special arrangements are made as with other Provinces for the division of the remaining sources of revenue between Imperial and Provincial Funds.

In 1910-1911, as a result of the Report of the Decentralisation Committee, modifications were introduced into the Settlement. Briefly, the Local Government retains 5-8ths of the net Land Revenue instead of a half, and the whole of the net forest revenue. Stamps, Excise and Income tax receipts are divided equally between Imperial and Provincial revenues. The unfairness of the Provincial settlement is disguised by the inclusion, under the head of Land revenue, of capitation taxes amounting to nearly a crore of rupees. This is a tax peculiar to Burma and should be entirely provincial. The injustice of the existing arrangement is redressed by contributions from Imperial revenues, which enable the Local Government to remain solvent (see below). But it is a very unsatisfactory form of finance that robs a province of what are rightly its own revenues and remedies the injustice by means of doles.

The Imperial Government makes a fixed annual assignment to the Burma Government. Under the settlement of 1911 this assignment was fixed at Rs. 12·90 lakhs. The total contributions from Imperial Funds during the year 1917-18 amounted to Rs. 46·93 lakhs. From April 1st, 1915, onwards the Government of India has allotted an additional recurring grant of Rs. 15·11 lakhs to the province, and has further guaranteed to the province a minimum aggregate of revenue advancing by Rs. 8 lakhs annually until 1923-24. No payments under this guarantee are to be made till after the war but it will have retrospective effect from the year 1911-12.

A fresh financial arrangement will be made when the Reform Scheme is introduced.

Public Works.

This Department is administered by two Chief Engineers who are also Secretaries to Government in the Public Works Department. There are eight Superintending Engineers (including one for Irrigation and a Sanitary Engineer), 83 Executive Engineers and Assistant Engineers. A Consulting Architect is attached to Head Quarters.

There are four Major Irrigation Works—Mandalay, Shwebo and Mon Canals and the Ye-U canal in the Shwebo District. These irrigate nearly 400,000 acres. Minor irrigation works maintained by the department supply water to another 400,000 acres, and a large area is supplied with water from minor works maintained by the villagers themselves. The area in

lower Burma protected from floods and thrown open to cultivation by means of embankments is nearly 800,000 acres.

Police.

The Police Force is divided into Civil, Military and Rangoon Town Police. The first two are under the control of the Inspector-General of Police, the latter is under the orders of the Commissioner of Police, Rangoon, an officer of the rank of Deputy Inspector-General.

There are four other Deputy Inspectors-General, one each for the Eastern and Western Range, one for the Railway and Criminal Investigation Department and one for the Military Police.

The sanctioned strength of the Civil Police Force at the end of 1917 was 1,369 officers, and 14,425 men, but the numbers were 74 officers and 864 men short of the sanctioned strength. The strength of the Military Police on the 1st January 1918 was 16,409 officers and men. The Rangoon Town Police stand at 106 officers and 1,246 men but at the end of 1917 the force was 3 officers and 105 men short.

A special feature of Burma is the Military Police. Its officers are deputed from the Indian Army. The rank and file are recruited from natives of India with a few Kachins, Karens and Shans. The experiment of recruiting Burmese on a small scale has been successful. The organisation is military, the force being divided into battalions. The object of the force is to supplement the regular troops in Burma Their duties, apart from their military work is to provide escorts for specie, prisoners, etc., and guards for Treasuries, Jails and Courts. During the year 1917 the Military Police furnished 4,644 volunteers who were drafted into Indian regiments on active service, making 9,858 since war began.

Education.

At the head is the Director of Public Instruction with a Deputy Director. There are 6 Inspectors of Schools belonging to the Imperial and 3 belonging to the Provincial Service, and 7 Assistant Inspectors and one Assistant Inspectress belonging to the Provincial Service. The Rangoon College is staffed by a Principal and ten Professors drawn from the Imperial Service with three from the Provincial Service. Outside the Education Department is the Educational Syndicate, which holds certain examinations and serves as an advisory body on educational questions referred to it by Government. Vernacular education is controlled by Divisional Boards assisted by District Advisory Committees. A scheme of the constitution of District Boards is nearing completion.

The Burma University has now been established but its constitution evoked strong local protest. Under Government there are—

An Arts College, Law School, Reformatory School, School of Engineering, Medical School, Veterinary Training School, Apprentice School, High School for Europeans, High School at Taunggyi for the sons of Shan Chiefs, 5 Normal Schools, 21 Anglo-Vernacular High Schools, and 16 Anglo-Vernacular Middle Schools.

Aided Schools, managed chiefly by Christian Missions, include 31 European Schools, 7 Normal Schools and 142 Anglo-Vernacular Schools. The number of schools managed by Buddhist Societies is steadily increasing.

A remarkable feature of education in Burma is the system of elementary education evolved, generations ago, by the genius of the people. Nearly every village has a monastery (hpoongyi-kyaung); every monastery is a village school and every Burman boy must, in accordance with his religion, attend that school, shaving his head and for the time wearing the yellow robe. At the hpoongyi-kyaungs the boys are taught reading and writing and an elementary native system of arithmetic. The result is that there are very few boys in Burma who are not able to read and write and the literacy of Burman men is 412 per mille

Of 8,447 Vernacular Schools registered under the grant in aid rules and subject to regular inspection about one-third are Monastic Schools.

Another feature of education in Burma is the excellent work of the American Baptist Mission, which has established schools in most of the important towns in Burma, as well as a College in Rangoon.

Medical.

The control of the Medical Department is vested in an Inspector-General of Civil Hospitals. Under him are 41 Civil Surgeons. There is also a Sanitary Commissioner, two Deputy Sanitary Commissioners, an Inspector-General of Prisons, three whole time Superintendents of Prisons, a Chemical Examiner and Bacteriologist and a Superintendent of the Lunatic Asylum.

A Civil Surgeon is in charge of each District, while at the summer Head Quarters of Maymyo there is a special Civil Surgeon.

The total number of Hospitals and Dispensaries was 274 at the end of March 1917. The Rangoon General Hospital is perhaps the finest in the East.

The Pasteur Institute was opened in Rangoon in July 1915. The Director is a senior member of the Indian Medical Service.

The total number of patients treated in 1916 was nearly 2 millions.

The expenditure on hospitals and dispensaries in 1917 was 20·09 lakhs.

Administration.

Lieutenant-Governor, Sir Reginald Craddock, K.C.S.I.

Private Secretary, Capt. P. W. Heanly.

Aide-de-Camp, Captain F. T. Drake-Brockman.

Honorary Aides-de-Camp, Lt.-Col. A W. H. Lee and Capt. Anthony Hamilton.

Indian Aides-de-Camp, Hony. Capt. Muzaffar Khan, Sardar Bahadur; Subadar Sao Tang; Naib Commandant Sarran Singh, Sardar Bahadur.

LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

Officials.

Frederick Lewisohn, M.A., I.C.S.
John Mark Somers Hunter.
Herbert Edward West Martindell, M.R. San. I.
Walter Booth-Gravely, M.A., I.C.S.
William Henry Lawson Cabell, B.A., I.C.S.
James MacKenna, M.A., C.I.E.
William Edward Lowry, B.A., I.C.S.
Charles Morgan Webb, C.I.E., I.C.S.
W. B. Brander, M.A., I.C.S.
Randal Casson, B.A., I.C.S.
Edward Higginbotham, Bar-at-law.

Non-Officials.

Sir Sao Mawng, K.C.I.E., K.S.M., *Sawbwa* of Yawnghwe.
Lim Chin Tsong, O.B.E.
Jules Emile Du Bern, O.B.E.
Dr. San Crombie Po, M.D.
Sir Abdul Karim Abdul Shakur Jamal, Kt., C.I.E.
Maung Po Tha, O.B.E.
Maung Nyun, M.B.E., A.T.M.
Dr. Nassarwanji Nowroji Parakh, L.F.P., & S., L.M. (Glas.), L.S.A. (Lon.)
Francis Foster Goodhue.
Adam Beattie Ritchie.
Maung Shwe Llay.
Maung Myint.
Maung Bah Oh.
Maung Chit Pe.
Maung Hla Pe.
Maung Thin, Bar-at-Law.

SECRETARIAT.

Chief Secretary, F. Lewisohn, M.A., I.C.S.

Revenue Secretary, W. Booth-Gravely.

Secretary, P.W.D., H. E. W. Martindell.

Officiating Joint Secretary, P. W. D., C. E. Rushton.

Financial Commissioner, W. E. Lowry, B.A. I.C.S.

Senior Registrar, A. Mackertoom.

Miscellaneous Appointments.

Settlement Commissioner and Director of Land Records, W. E. Lowry, B.A.
Director of Agriculture, John Clague, I.C.S.
Consulting Architect, E. J. Pullar.
Superintendent and Political Officer, Southern Shan States, G. P. Andrew.
Superintendent and Political Officer, Northern Shan States, E. O. Fowler.
Director of Public Instruction, J. M. S. Hunter, M.A.
Inspector-General of Police, E. C. S. Shuttleworth, C.I.E.
Chief Conservator of Forests, F. A. Leete, F.C.H.
Inspector-General of Civil Hospitals, Lt.-Col. J. Entrican, M.D., I.M.S.
Sanitary Commissioner, Lt.-Col. C. E. Williams.
Inspector-General of Prisons, Major H. H. G. Knapp.
Commissioner of Excise, E. H. Jones, I.C.S.
Accountant-General, Mohini Kanta Ghatak, M.A.
Postmaster-General, G. W. Talbot.

Chief Commissioners of Burma.

Lieut.-Colonel A. P. Phayre, C.B. ..	1862
Colonel A. Fytche, C.S.I.	1867
Lieut.-Colonel R. D. Ardagh ..	1870
The Hon. Ashley Eden, C.S.I. ..	1871
A. R. Thompson, C.S.I.	1875
C. U. Aitchison, C.S.I.	1878
C. E. Bernard, C.S.I.	1880
C. H. T. Crosthwaite	1883
Sir C. E. Bernard, K.C.S.I. ..	1886
C. H. T. Crosthwaite, C.S.I. ..	1887
A. P. MacDonnell, C.S.I. (*a*) ..	1889
Alexander Mackenzie, C.S.I. ..	1890
D. M. Smeaton	1892
Sir F. W. R. Fryer, K.C.S.I. ..	1895

(*a*) Afterwards (by creation) Baron MacDonnell.

Lieutenant-Governors of Burma.

Sir F. W. R. Fryer, K.C.S.I.	1897
Sir H. S. Barnes, K.C.S.I., K.C.V.O. ..	1903
Sir H. T. White, K.C.I.E.	1905
Sir Harvey Adamson, Kt., K.C.S.I., LL.D.	1910
Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1915
Sir Reginald Craddock, K.C.S.I. ..	1917

COUNCIL OF THE LIEUTENANT-GOVERNOR.

OFFICIAL MEMBERS.

	Date of appointment.
Walter Booth-Gravely, M.A., I.C.S.	**1st June 1920.**
Frederick Lewisohn, M.A., I.C.S.	**7th June 1920.**
John Mark Somers Hunter, M.A.	**7th June 1920.**
Herbert Edward West Martindell, C.I.E., M.R. San. I.	**7th June 1920.**
William Henry Lawson Cabell, B.A., I.C.S.	**24th July 1920.**
James MacKenna, M.A., C.I.E., I.C.S., Vice-President	**8th November 1920.**
William Edward Lowry, B.A., I.C.S.	**12th January 1921.**
Charles Morgan Webb, M.A., C.I.E., I.C.S.	**24th January 1921.**
William Browne Brander, M.A., C.B.E., I.C.S.	**26th January 1921.**
Randal Casson, B.A., I.C.S.	**14th April 1921.**
Edward Higinbotham, Bar.-at-Law	**7th June 1921.**

NON-OFFICIAL MEMBERS.

Francis Foster Goodliffe	11th December 1919.
Sir Sao Mawng, K.C.I.E., K.S.M., *Sawbwa* of Yawnghwe	7th June 1920.
Lim Chin Tsong, O.B.E.	7th June 1920.
Jules Emile DuBern, O.B.E.	7th June 1920.
Dr. San Crombie Po, M.D.	7th June 1920.
Sir Abdul Karim Abdul Shakur Jamal, KT., C.I.E.	7th June 1920.
Maung Po Tha, O.B.E.	7th June 1920.
Maung Nyun, M.B.E., A.T.M.	7th June 1920.
Dr. Nasarwanji Nowroji Parakh, L.F.P. & L.M.S. (Glas.), L.S.A. (Lon.)	7th June 1920.
Maung Shwe Llay	24th July 1920.
Maung Myint	24th July 1920.
Maung Bah Oh	24th July 1920.
Maung Chit Pe	24th July 1920.
Maung Hla Pe	24th July 1920.
Maung Thin, Bar.-at-Law	24th July 1920.
Adam Beattie Ritchie	23rd March 1921.

SECRETARIES, UNDER-SECRETARIES, ASSISTANT SECRETARIES, Etc., TO GOVERNMENT.

F. Lewisohn, M.A., I.C.S.	Chief Secretary.
H. E. W. Martindell, C.I.E., M.R. San. I.	Secretary, Public Works Department.
C. E. Rushton	Officiating Joint Secretary, Public Works Department.
W. Booth-Gravely, M.A., I.C.S.	Officiating Revenue Secretary.
W. B. Brander, M.A., C.B.E., I.C.S.	Officiating Secretary.
J. H. Wise, I.C.S.	Officiating Under-Secretary, Chief Secretary's Department.
Maung Tun Ya, A.T.M.	Officiating Assistant Secretary, Revenue Secretary's Department.
A. McCracken, M.A., I.C.S.	Officiating Under-Secretary, Secretary's Department.
J. M. B. Stuart, B.A.	Under-Secretary, Public Works Department.
R. Casson, B.A., I.C.S.	Officiating Legal Remembrancer and Secretary, Legislative and Judicial Departments.
J. Shaw, Bar-at-Law	Officiating Deputy Legal Remembrancer and Secretary, Legislative and Judicial Departments.
Maung Sein Tun Aung, B.A., B.L.	Officiating Assistant Secretary, Legislative and Judicial Departments.
G. T. Peters	Assistant Secretary, Public Works Department.
A. Mackertoom, B.A.	Officiating Registrar, Chief Secretary's Office.
C. O. Edge	Officiating Registrar, Revenue Secretary's Office.
W. Pilcher	Officiating Registrar, Secretary's Office.
W. J. Peters	Registarar, Public Works Department Secretariat.

Bihar and Orissa.

Bihar and Orissa lies between 19°-02′ and 27°-30′ N. latitude and between 82°-31′ and 88°-26′ E. longitude and includes the three provinces of Bihar, Orissa and Chota Nagpur, and is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal and the Bay of Bengal; on the south by the Bay of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces.

The area of the British territories which constitute the Governorship of Bihar and Orissa is 83,181 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are two groups of petty States which lie to the south and south-west of the Province and which under the names of the Tributary and Feudatory States of Orissa and the Political States of Chota Nagpur are governed each by its own Chief under the superintendence and with the advice of the Commissioner of the nearest British Administrative division assisted, in the case of the Orissa States, by a Political Agent. The area of these territories is 28,648 square miles and as it is usual to include them when speaking of Bihar and Orissa the area of the whole Province may be stated at 111,829 square miles. Two of the provinces of the Governorship of Bihar and Orissa, *viz.*, Bihar and Orissa, consist of great river valleys, the third, Chota Nagpur, is a mountainous region which separates them from the Central Indian Plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east and walled in on the north-west by the hilly country of the Tributary States. Bihar lies on the north of the Province and comprises the valley of the Ganges from the spot where it issues from the territories of the Lieutenant-Governor of the United Provinces of Agra and Oudh till it enters Bengal near Rajmahal. Between Bihar and Orissa lies Chota Nagpur. Following the main geographical lines there are five Civil Divisions with head-quarters at Patna, Muzaffarpur (for Tirhut), Bhagalpur, Cuttack (for Orissa) and Ranchi (for Chota Nagpur).

The People.

The temporary head-quarters of Government are at Ranchi in Chota Nagpur, while the permanent Capital at Patna is nearing completion, the High Court, Government House and the Secretariat being already occupied. Various residences for the officials and quarters for the ministerial officers remain to be built. The new capital which lies between the Military Cantonment of Dinapore and the old civil station of Bankipore is known as "Patna", the old town being called "Patna City." The Province has at present no hill station. Enquiries are being made and records taken at Netarhat, an extensive plateau elevation 3,700 feet, 90 miles over west of Ranchi, where climatic conditions closely resemble Pachmarhi.

The Province has a population of 33,998,778 persons which is very little less than that of France and rather more than that of the Bombay Presidency. The province is almost entirely rural, no fewer than 966 per mille of the population living in villages. Even so with 344 persons per square mile, Bihar and Orissa is more thickly populated than Germany. There are only three towns which can be classed as cities, namely, Patna, Gaya and Bhagalpur. During the last thirty years the population of Patna, the capital designate, has been steadily diminishing. Hindus form an overwhelming majority of the population. Though the Muhammadans form less than one-tenth of the total population they constitute more than one-fifth of urban population of the province. Animists account for 7 per cent. These are inhabitants of the Chota Nagpur plateau and the Santal Parganas, the latter district being a continuation of the plateau in a north-easterly direction.

Industries.*

The principal industry is agriculture, Bihar, more especially North Bihar, being the "Garden of India." Rice is the staple crop but the spring crops, wheat, barley, and the like are of considerable importance. It is estimated that the normal area cultivated with rice is 15,615,100 acres or 48 per cent. of the cropped area of the Province. Wheat is grown on 1,121,800 million acres, barley on 1,411,800 acres, maize or Indian-corn on 1,634,600 acres, the latter being an autumn crop. Oil-seeds are an important crop, the cultivation having been stimulated by the demand for them in Europe. It is estimated that 1,932,300 acres of land are annually cropped with oil-seeds in the Province. There is irrigation in Shahabad, Gaya, Champaran and Muzaffarpur districts in Bihar and in Balasore and Cuttack in Orissa. The Indigo industry had before the war been steadily on the decline, the total area sown having decreased from 342,000 acres in 1896 to 109,600 acres in 1911. The principal cause of this was the discovery of the possibilities of manufacturing synthetic or chemically prepared indigo on a commercial scale, a process chiefly carried out in Germany. Owing, however, to the stoppage of supplies from Germany the value of natural indigo rose enormously and the area under cultivation temporarily increased. In the district of Purnea and in Orissa, and parts of the Tirhut Division jute is grown, but the acreage varies according to the price of jute. The last serious famine was in 1895-96. In any year in which monsoon currents from either the Bay of Bengal or the Arabian Sea are unduly late in their arrival or cease abruptly before the middle of September the agricultural situation is very grave. It may be said that for Bihar the most important rainfall is that known as the *hatia*, due towards the end of September or up to middle of October. Rain at this time not only

* The figures given in this paragraph relate to British territory only.

contributes materially to an increased outturn of the rice crop, but also provides the moisture necessary for starting the spring or *rabi* crops.

Manufactures.

Opium was formerly, with indigo, the chief manufactured product of Bihar, but in consequence of the agreement with the Chinese Government the Patna Factory has been closed. At Monghyr the Peninsular Tobacco Company have erected one of the largest cigarette factories in the world and as a result tobacco is being grown much more extensively. There are two important iron works in the Singhbhum District, Messrs. Tata & Co.'s Iron and Steel Works at Sakchi and the Bengal Iron and Steel Company at Dhulia. The Cape Copper Co are also opening up copper mines at the Rakha Hills in the same district. But by far the most important of the mineral industries in the province is that concerned in the raising of coal. The coalfields in the Manbhum District have undergone an extraordinary development in the past twenty years. The war has demonstrated the great value of the mica mines in Hazaribagh and Gaya which are now entirely controlled by Government and the output from which has considerably increased under the management of an officer deputed from the Geological Department.

Administration.

The Province on first constitution was administered by a Lieutenant-Governor-in-Council, thus being unique in India as the only Lieutenant Governorship with a Council. Under the Reform Act of 1919 it was raised to the status of a Governorship, with an Executive Council and Ministers. The principles of the provincial administration are fully explained in the section The Provincial Governorships, where the division of the administration into Reserved Subjects, in charge of the Governor and his Executive Council, and Transferred Subjects, in charge of the Governor and Ministers chosen from the Legislative Council, is set out in detail. In all these respects Bihar and Orissa is on the same plane as the other Provinces in India.

Finance.

The Province of Bihar and Orissa was formed with five divisions, detached from the old province of Bengal with effect from the 1st April 1912. The old arrangements made with the Government of Bengal regarding the financial administration of the Province therefore ceased to apply from that date. A fresh arrangement has, however, been made, with the approval of the Secretary of State. As the method adopted was in some measure tentative and provisional, a temporary settlement for a period of three years only has been effected. Owing to the war it has been found necessary to continue the provisional settlement for the present. Under the terms of this settlement the whole of the receipts under the heads of Interest, Forest, Registration, Courts of Law, Jails, Police, Ports and Pilotage, Education, Medical and superannuation receipts have been made over entirely to the local Government together with their corresponding charges. In addition to these, it receives three-fourths of the receipts from excise, the whole of the Land Revenue collected from Government Estates, one-half of the receipts under all other sub-heads excepting recoveries from zamindars and raiyats on account of survey and settlement in Bihar and other similar special surveys and the whole of the receipts under Scientific and other Minor Departments.

The financial relation of the Province with the Government of India and the contribution which the Province will receive from the funds of the Government of India are set out in the section. The Provincial Governments (*q. v.*) Bihar being a backward Province, with a small and slowly expanding revenue has received special treatment in this matter.

Public Works.

The Public Works Department in the Province of Bihar and Orissa consists of two branches, *viz.*:—(1) Roads and Buildings, and (2) Irrigation and Marine, which also deals with railways. Each branch has a Chief Engineer, who is also Secretary to the Local Government with an Engineer Officer as Under Secretary under him. There is also a non-professional Assistant Secretary, a Consulting Architect and a Sanitary Engineer, who works under a Sanitary Board. The electrical work of the Province is carried out by an Electrical Inspector and a staff of subordinates.

Justice.

The administration of justice is controlled by the High Court of Judicature recently established at Patna. In the administration of civil justice below the High Court are the District Judges as Courts of Appeal, the Subordinate Judges and the Munsiffs. The jurisdiction of a District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. It does not, however, include the powers of a Small Cause Court, unless these be specially conferred. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed Rs. 1,000 though the limit may be extended to Rs. 2,000. On the criminal side the Sessions Judge hears appeals from Magistrates exercising first class powers while the District Magistrate is the appellate authority for Magistrates exercising second and third class powers. The District Magistrate can also be, though in point of fact he very rarely is, a court of first instance. It is usual in most districts for a Joint Magistrate or a Deputy Magistrate to receive complaints and police reports, cases of difficulty or importance being referred to the District Magistrate who is responsible for the peace of the district. In the non-regulation districts the Deputy Commissioner and his subordinates exercise civil powers and hear rent suits.

Local Self-Government.

Bengal Act III of 1884, which regulates the constitution, powers and proceedings of Municipal bodies in this Province has been amended by the Bengal Acts IV of 1894 and II of 1896. By these enactments the elective franchise has been further extended, and now provides for the establishment and maintenance of veterinary institutions and the training of the requi-

site staff, the improvement of breeds of cattle, the training and employment of female medical practitioners, the promotion of physical culture, and the establishment and maintenance of free libraries.

The total number of Municipalities at present in existence is 55. The ratepayers of 49 Municipalities have been granted the privilege of electing two-thirds of the number of Commissioners fixed in each case, whilst in 34 cases the Commissioners are authorised to elect their own Chairman. In the remaining towns Government has reserved to itself the power of appointing the Commissioners or Chairman, as the case may be, owing either to the backwardness of the place or to the necessity for holding the balance against contending interests or strong party feeling. It is only in 4 towns, however, that Government exercises complete control in the appointment of both Commissioners and Chairmen.

Apart from Municipalities, each district with the exception of the Santal Parganas, Angul and Singhbhum has a District Board constituted under Bengal Act III of 1885. Municipal areas are excluded in accordance with the provisions of section 1. Local Boards have been formed in all of these districts where there are sub-divisions, except Ranchi. There are at present 18 District Boards, 45 Local Boards, and 23 Union Committees in the Province.

In accordance with the provisions of section 7 of the Act, a District Board is to consist of not less than 9 members. Local Boards are entitled to elect such proportion (as a rule one-half) of the whole of the District Board as the Lieutenant-Governor may direct. In districts where there are no Local Boards, the whole of the members are appointed by Government. The Chairman of the District Board is appointed by Government, he is in practice always the Magistrate of the district.

Land Tenures.

Estates in the Province of Bihar and Orissa are of three kinds, namely, those permanently settled from 1793 which are to be found in the Patna, Tirhut and Bhagalpur divisions, those temporarily settled as in Chota Nagpur and parts of Orissa, and estates held direct by Government as proprietor or managed by the Court of Wards. The passing of the Bengal Tenancy Act (VIII of 1885) safeguarded the rights of the cultivators under the Permanent Settlement Act. Further, the Settlement Department under the supervision of the Director of Land Records makes periodical survey and settlement operations in the various districts, both permanently and temporarily settled. In the former, the rights of the undertenants are recorded and attested, while in the latter there is the re-settlement of rents. In the re-settlement proceedings, rents are fixed not only for the landlords but also for all the tenants. A settlement can be ordered by Government on application made by raiyats.

The tenures of Orissa are somewhat different. Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure holders, who were originally village headmen dealing more or less direct with the revenue authorities. They have a variety of names, such as *mukadam, padhan, maurusi, sarbarakar, pursethi, khariddar* and *shikmi* zamindar. These sub-proprietors or proprietary tenure holders pay their revenue through the zamindars of the estates within which their lands lie. In Chota Nagpur, Orissa and the Santal Parganas, the rights of village headmen have been recognised. The headman collects the rents and is responsible for them minus a deduction as remuneration for his trouble.

Both Orissa and Chota Nagpur have their own Tenancy Acts.

Police.

The Departments of Police, Prisons and Registration are each under the general direction of Government, supervised and inspected by an Inspector-General with a staff of assistants. The Commissioner of Excise and Salt is also Inspector-General of Registration.

Under the Inspector-General of Police are three Deputy Inspectors-General and 27 Superintendents. There are also 27 Assistant Superintendents of Police and 15 Deputy Superintendents. The force is divided into the District Police, the Railway Police and the Military Police. A Criminal Investigation Department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes whose operations extend beyond a single district and to control, advise, and assist in investigations of crime of this class and other serious cases in which its assistance may be invoked. There are two companies of Military Police which are maintained as reserves to deal with serious and organised disturbances and perform no ordinary civil duties.

Education.

The position of education in the Province, with the numbers attending schools, is set out in the section Education and the tables attached thereto (*q. v.*) showing in great detail the educational status of the administration.

There is a University at Patna, whose functions are described under the Indian Universities. (*q. v.*)

There are 7 Arts Colleges with 2,811 students and one Training College for 32 students, which with the Patna College, the Ravenshaw College at Cuttack and the Greer Bhumihar Brahman College at Muzaffarpur is maintained by Government. The College at Bhagalpur, the Bihar National College at Bankipore and the Dublin University Mission College at Hazaribagh are aided by Government.

Medical.

The Medical Department is under the control of the Inspector-General of Civil Hospitals who is a Member of the Indian Medical Service. Under him there are 20 Civil Surgeons who are responsible for the medical work of the districts at the head-quarters of which they are stationed. 57 Dispensaries are maintained by Government in addition to 330 Dispensaries maintained by Local bodies, Railways, private persons, etc. 3,463,145 patients including 50,625 in-patients in public dispensaries were treated.

The total income of the medical institutions amounted to Rs. 16,69,916. A large asylum for Europeans has been opened at Ranchi which receives patients from Northern India. A similar institution is under construction for the Indians. At present these are treated at Patna.

Administration.

GOVERNOR.

His Excellency Lord Sinha of Raipur, K.C.I.E., Assumed office, December 1920. (Resigned December 1921.)

PERSONAL STAFF.

Private Secretary, William Ballie Brett, I.C.S.

Aide-de-Camp, Capt. E. A. Haskelt-Smith.

Honorary Aides-de-Camp, Hon. Capt. Sardar Bahadur Hira Singh, Subadar Major Sita Ram Singh, Major A. T. Peppe and Major J. A. M. Wilson.

EXECUTIVE COUNCIL.

Havilland Le Mesurier, C.S.I., C.I.E., I.C.S.
Sachchidanand Sinha.
Hugh McPherson, C.S.I., I.C.S.

MINISTERS.

Khan Bahadur Saiyed Muhammad Fakhruddin.
Madhusudan Das, C.I.E.

SECRETARIAT.

Chief Secretary to Government, Political, Appointment, and Educational Departments, G. Rainy, C.I.E.

Secretary to Government, Financial and Municipal Departments, J. D. Sifton.

Secretary to Government, Revenue Department, J. A. Hubback.

Secretary to Government (P. W. D.), Irrigation Branch, W. S. Bremner.

Buildings and Roads Branch, E. Blaber.

BOARD OF REVENUE.

Member, E. H. C. Walsh.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, G. E. Fawcus.

Inspector-General of Police, R. T. Dundas.

Conservator of Forests, E. R. Stevens.

Inspector-General of Civil Hospitals, Col. Herbert Austen Smith.

Sanitary Commissioner, Major William Charles Ross.

Inspector-General of Prisons, Major W. Gillit, C.I.E., I.M.S.

Accountant-General, D. R. Matheson.

Director of Agriculture, A. C. Dobbs.

BIHAR AND ORISSA LEGISLATIVE COUNCIL.

THE HON'BLE SIR WALTER MAUDE, K.C.I.E., C.S.I., I.C.S.—*President.*
MR. SANKARA BALAJI DHAVLE, I.C.S.—*Secretary.*

COUNCILLORS.

EX-OFFICIO.

THE HON'BLE SIR WALTER MAUDE, K.C.I.E., C.S.I., I.C.S.
THE HON'BLE MR. HAVILLAND LEMESURIER, C.S.I., C.I.E., I.C.S.
THE HON'BLE RAI BAHADUR KRISHNA SAHAY.

NOMINATED.

Officials.

Mr. Leonard Frederick Morshead, I.C.S.
Mr. Victor Herbert Jackson.
Mr. George Rainy, C.S.I., C.I.E., I.C.S.
Mr. James David Sifton, C.I.E., I.C.S.
Mr. John Austen Hubback, I.C.S.
Mr. Walter Sidney Bremner.
Mr. Edward Blaber.
Mr. Maurice Garnier Hallett, I.C.S.
Mr. Donald Weston, I.C.S.
Colonel Herbert Austen-Smith, C.I.E., I.M.S.
Mr. Walter Swain.
Mr. Bernard Abdy Collins, I.C.S.
Mr. Sankara Balaji Dhavle, I.C.S.

Non-officials.

Maharaja Bahadur Sir Ravaneshvar Prasad Singh, K.C.I.E.
Mr. Saiyid Hasan Imam, Barrister-at-Law.

REPRESENTATIVES OF CLASSES AND COMMUNITIES.

Mr. Dhan Masih Panna	Aborigines.
Reverend Edward Hamilton Whitley	
Reverend Emanuel Sukh	Depressed Classes.
Reverend Percival Edwin Heberlet	
Mr. Dhanjishah Meherjibhai Madan	Industrial interests other than planting and mining.
Rai Bahadur Purnendu Narayan Sinha ..	The domiciled Bengali Community.
Mr. Francis Ernest Lopes Morrison	The Anglo-Indian Community.
Reverend Prittam Luther Singh	The Indian Christian Community.
Mr. Baij Nath	The labouring classes.

ELECTED.

Patna Division.

Mr. Muhammad Yunus	Patna Division Muhammadan Urban.
Maulavi Saiyid Muhammad Husain ..	East Patna Muhammadan Rural.
The Hon'ble Khan Bahadur Saiyid Muhammad Fakhr-ud-din.	West Patna do.

Babu Shyam Narayan Sinha Sharma ..	Patna Division Non-Muhammadan Urban.
Babu Ram Gopal Singh Chaudhuri ..	Patna Non-Muhammadan Urban.
Babu Ganesh Datta Singh	East Patna do.
Babu Mithila Sharan Sinha	West Patna do.
Raja Harihar Prasad Narayan Singh, O.B.E., of Amawan.	Landholders, Patna Division.
Maulvi Malik Mukhtar Ahmad	Gaya Muhammadan Rural.
Babu Chhote Narayan Singh	West Gaya Non-Muhammadan Rural.
Rai Bahadur Kashi Nath Singh	Central Gaya do.
Babu Rameshvar Prashad Singh ..	East Gaya do.
Maulvi Hafiz Nurul Haqq	Shahabad Muhammadan Rural.
Vacant.	Central Shahabad Non-Muhammadan Rural
Babu Rajivaranjan Prasad Sinha ..	South Shahabad do.
Babu Dvarika Prasad Singh	Arrah do.

Tirhut Division.

Khan Bahadur Saiyid Ahmed Husain ..	Tirhut Division Muhammadan Urban.
Maulvi Saiyid Mehdi Hasan	Muzaffarpur Muhammadan Rural.
Maulvi Letafat Husain Khan	Darbhanga do.
Maulvi Saiyid Mubarak Ali .. .	Saran Muhammadan Rural.
Maulvi Saiyid Abbas Ali	Champaran Muhammadan Rural.
Rai Bahadur Dvarika Nath .. .	Tirhut Division Non-Muhammadan Urban.
Babu Raghubans Thakur	North-West Darbhanga Non-Muhammadan Rural.
Babu Shiva Shankar Jha	North-East Darbhanga Non-Muhammadan Rural.
Babu Ram Nihora Singh	South-East Darbhanga Non-Muhammadan Rural.
Babu Kameshvar Narayan Sinha ..	Samastipur Non-Muhammadan Rural.
Babu Maheshvar Prasad Narayan Singh	North Muzaffarpur do.
Babu Raghunandan Prasad Sinha ..	East Muzaffarpur do.
Babu Krishna Prasad Narayan Singh ..	West Muzaffarpur do.
Babu Radha Krishna	Hajipur Non-Muhammadan Rural
Babu Madhaveshvarendra Sahi	North Saran Non-Muhammadan Rural
Babu Nirsu Narayan Sinha	South Saran do.
Babu Lakshmi Mohan Misra	North Champaran do.
Babu Ambika Prasad Upadhyaya ..	South Champaran do.
Babu Krishnadev Narayan Maitha ..	Landholders, Tirhut Division.

Bhagalpur Division.

Khan Bahadur Saiyid Muhammad Tahir..	Bhagalpur Division Muhammadan Urban.
Khan Bahadur Saiyid Muhammad Naim .	Bhagalpur Muhammadan Rural.
Mr. Shah Muhammad Yahya	Monghyr do.
Maulavi Mir Faiyaz Ali	Purnea do.
Maulavi Saiyid Mohin-ud-din Mirza ..	Kishanganj do.
Maulavi Muhammad Umid Ali	Santal Parganas do
Babu Jyotish Chandra Bhattacharjya ..	Bhagalpur Division Non-Muhammadan Urban.
Swami Vidyanand alias Bishva Bharan Prasad.	North Bhagalpur Non-Muhammadan Rural.
Babu Bhuvaneshvari Prasad Mandal ..	Central Bhagalpur Non-Muhammadan Rural.
Babu Sukh Raj Ray	South Bhagalpur do.
Maharaj Kumar Chandra Maulcshvar Prashad Singh.	South-West Monghyr do.
Rai Sahib Kharag Narayan	North-West Monghyr do.
Vacant	East Monghyr Non-Muhammadan Rural.
Do.	Purnea Non-Muhammadan Rural.
Babu Jogendra Narayan Singh	Santal Parganas North Non-Muhammadan Rural.
Babu Satya Narayan Sinha	Santal Parganas South Non-Muhammadan Rural.
Raja Bahadur Kirtyanand Singh of Banaili.	Landholders' Bhagalpur Division.

Orissa Division.

Maulavi Shaikh Abdul Majid	Orissa Division Muhammadan Rural.
The Hon'ble Mr. Madhusudan Das, C.I.E...	Orissa Division Non-Muhammadan Urban.
Babu Birabar Narayan Chandra Dhir Narendra.	North Cuttack do.
Babu Rebati Kanta Ghosh	South Cuttack do.
Rai Bahadur Harendra Narayan Ray Mahashay.	North Balasore do.
Chaudhuri Bhagbat Prasad Samantarai Mahapatra.	South Balasore do.

Babu Pitabas Patnaik	North Puri Non-Muhammadan Rural.
Mahanth Gadadhar Ramanuj Das ..	South Puri do.
Babu Shankar Prasad Misra	Sambalpur do.
Raja Rajendra Narayan Bhanja Deo, O.B.E., of Kanika.	Landholder's, Orissa Division.

Chota Nagpur Division.

Khan Bahadur Khwaja Muhammad Nur..	Chota Nagpur Division Muhammadan Rural.
Rai Bahadur Radha Gobind Chaudhuri..	Chota Nagpur Division Non-Muhammadan Urban.
Rai Bahadur Sharat Chandra Ray ..	Ranchi Non-Muhammadan Rural.
Rai Bahadur Gopi Krishna	Hazaribagh Non-Muhammadan Rural.
Babu Devaki Prasad Sinha	Palamau Non-Muhammadan Rural.
Babu Jyotirmay Chattarji	South Manbhum Non-Muhammadan Rural.
Dulu Manki	Singhbhum Non-Muhammadan Rural.
Babu Shivadas Banarji	North Manbhum Non-Muhammadan Rural.
Kumar Thakurai Girivar Prashad Singh..	Landholders' Chota Nagpur Division.

Others.

Mr. Prasanta Kumar Sen	Patna University.
Mr. Cyril Gregory Atkins	European Constituency.
Mr. Julian Veitch Jameson	Planting Constitutency.
Mr. John Herbert Pattinson	Indian Mining Association.
Babu Umesh Chandra Banarji	Indian Mining Federation.

The Central Provinces and Berar.

The Central Provinces and Berar compose a great triangle of country midway between Bombay and Bengal. Their area is 130,991 miles, of which 82,000 are British territory proper, 18,000 (*viz.* Berar) held on perpetual lease from the Nizam and the remainder held by Feudatory Chiefs. The population (1921) is 13,908,514 under British administration, including 3,081,212 in Berar. Various parts of the Central Provinces passed under British control at different times in the wars and tumult in the first half of the 19th century and the several parts were amalgamated after the Mutiny, in 1861, into the Chief Commissionership of the Central Provinces. Berar was, in 1853, assigned to the East India Company as part of a financial arrangement with the Nizam for the maintenance of the Hyderabad contingent, and was leased in perpetuity to the Central Provinces in 1903, as the result of a fresh agreement with the Nizam.

The Country.

The Central Provinces may roughly be divided into three tracts of upland, with two intervening ones of plain country. In the northwest, the Vindhyan plateau is broken country, covered with poor and stunted forest. Below its precipitous southern slopes stretches the rich wheat growing country of the Nerbudda valley. Then comes the high Satpura plateau, characterised by forest-covered hills and deep water-cut ravines. Its hills decline into the Nagpur plain, whose broad stretches of shallow black cotton soil make it one of the more important cotton tracts of India and the wealthiest part of the C. P. proper. The Eastern half of the plain lies in the valley of the Wainganga and is mainly a rice growing country. Its numerous irrigation tanks have given it the name of the "lake country" of Nagpur. Further east is the far-reaching rice country of Chattisgarh, in the Mahanadi basin. The south-east of the C. P. is again mountainous, containing 24,000 square miles of forest and precipitous ravines, and mostly inhabited by jungle tribes. The Feudatory States of Bastar and Kanker lie in this region. Berar lies to the south-west of the C. P. and its chief characteristic is its rich black cotton-soil plains.

The People.

The population of the province is a comparatively new community. Before the advent of the Aryans, the whole of it was peopled by the Gonds and these aboriginal inhabitants fared better from the Aryans than their like in most parts of India because of the rugged nature of their home. But successive waves of immigration flowed into the province from all sides. The early inhabitants were driven into the inaccessible forests and hills, where they now outnumber all the other hill and forest tribes and form nearly a quarter of the whole population of the C. P., being found in large numbers in all parts of the province, particularly in the south-east. The main divisions of the new comers are indicated by the language divisions of the province. Hindi, brought in by the Hindustani-speaking peoples of the North, prevails in the North and East. Marathi in Berar and the west and centre of the C. P. Hindi is spoken by 56 per cent. of the population and is the *lingua franca*. Marathi by 31 per cent. and in Berar and Gondi by 7 per cent. The effects of invasion are curiously illustrated in Berar, where numbers of Moslems have Hindu names, being descendants of former Hindu officials who on the Mahomedan invasion adopted Islam rather than lose their positions. The last census shows that a gradual Brahmanising of the aboriginal tribes is going on. The tribes are not regarded as impure by the Hindus and the process of absorption is more or less civilising.

Industries.

When Sir Richard Temple became first Chief Commissioner of the C. P. the province was land-locked. The only road was that leading in from Jubbulpore to Nagpur. The British administration has made roads in all directions, the two trunk railways between Bombay and Calcutta run across the province and in the last few years a great impetus has been given to the construction of subsidiary lines. These developments have caused a steady growth of trade and have aroused vigorous progress in every department of life. The prime industry is, of course, agriculture, which is assisted by one of the most admirable agricultural departments in India and is now receiving additional strength by a phenomenal growth of the co-operative credit movement. The land tenure is chiefly on the zemindari, or great landlord system, ranging, with numerous variations, from the great Feudatory chiefships, which are on this basis, to holdings of small dimensions. A system of land legislation has gradually been built up to protect the individual cultivator. Berar is settled on the Bombay ryotwari system. About 16,000 square miles of the C. P. is forest; in Berar the forest area is about 3,300 square miles, the total forest area being one-fifth of the whole Province. The rugged nature of the greater part of the country makes forest conservation difficult and costly. Excluding forest and waste 57 per cent. of the total land is occupied for cultivation; in the most advanced districts the proportion is 80 per cent; and in Berar the figure is also high. The cultivated area is extending continuously except for the temporary checks caused by bad seasons. Rice is the most important crop of the C. P., covering a quarter of the cropped area. Wheat comes next, with 15½ per cent., then pulses and cereals used for food and oil seeds, with 11 per cent. and cotton with 7 per cent. In Berar cotton occupies 40 per cent. of the cropped area, jowar covers nearly an equal extent, then wheat and oil seeds. In agriculture more than half the working population is female.

Commerce and Manufactures.

Industrial life is only in its earliest development except in one or two centres, where the introduction of modern enterprise along the railway routes has laid the foundations for great future developments of the natural wealth of the province. Nagpur is the chief centre of a busy cotton spinning industry. The Empress Mills, owned by Parsi manufacturers, were opened there in 1877 and the general prosperity of the cotton trade has led to the addition of many mills here and in other parts of the province. The total amount of spun yarn exported annually from the Province is about 200,000 maunds, valued at nearly 55 lakhs of rupees.

The largest numbers engaged in any of the modern industrial concerns are employed in manganese mining which in 1920 employed 11,368 persons and raised 541,892 tons. Then follow coal mining with an output of 490,979 tons and 10,204 persons employed, the Jubbulpore marble quarries and allied works, the limestone quarries and the mines for pottery clay, soapstone, &c.

The total number of factories of all kinds legally so described was 445 in 1920, the latest period for which returns are available and the number of people employed in them 51,840. The same economic influences which are operative in every progressive country during its transition stage are at work in the C. P. and Berar, gradually sapping the strength of the old village industries, as communications improve, and concentrating industries in the towns. While the village industries are fading away a large development of trade has taken place. The last pre-war reports showed an increase in volume by one-third in eight years.

Administration.

The administration of the Central Provinces and Berar is conducted by a Governor-in-Council, who is appointed by the Crown. He is assisted by three secretaries, two under secretaries, two assistant secretaries. Simultaneously with the jubilee of the foundation of the Province in 1913 a Legislative Council was constituted. It consisted of 24 members, excluding the Chief Commissioner, 7 being elected by Municipalities, District Council, and Landholders in the C. P. and 17 nominated by the Chief Commissioner, of whom not more than 10 might be officials and 3 were to be non-officials chosen respectively by the municipalities, District Boards and Landholders of Berar. The Chief Commissioner had power to nominate an additional member, official or non-official, who had special knowledge of a subject on which legislation was pending. Under the Reform Scheme the administration is conducted, in relation to reserved subjects, by a Governor with an Executive Council of 2 members, one of whom is a non-official, and in relation to transferred subjects by a Governor acting with two Indian ministers.

The local legislature consists of 70 members, at least 70 per cent. of whom are elected and not more than 20 per cent. are officials. The Governor (who is not a member of the Council) has the right of nominating two additional members with special knowledge on any subject regarding which legislation is before the Chamber. The C. P. are divided for administrative purposes into four divisions, and Berar constitutes another division. Each of these is controlled by a Commissioner. Berar is divided into four districts, three other divisions into five districts each and one into three, and these are controlled by Deputy Commissioners, immediately subordinate to the Commissioners. The principal heads of Provincial departments are the Commissioner of Settlements and Director of Land Records, the Chief Conservator of Forests, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Inspector-General of Police, the Inspector-General of Prisons, the Director of Public Instruction, the Excise Commissioner, the Inspector-General of Registration, Income Tax Commissioner, the Director of Agriculture, the Registrar of Co-operative Societies, and the Director of Industries. The Deputy-Commissioners of districts are the chief revenue authorities and District Magistrates and they exercise the usual powers and functions of a district officer. The district forests are managed by a forest officer, usually a member of the Imperial Forest Service, over whom the Deputy-Commissioner has certain powers of supervision, particularly in matters affecting the welfare of the people. Each district has a Civil Surgeon, who is generally also Superintendent of the District Jail and whose work is also in various respects supervised by the Deputy Commissioner. The Deputy Commissioner is also marriage registrar and manages the estates of his district which are under the Court of Wards. In his revenue and criminal work the Deputy Commissioner is assisted by (a) one or more Assistant Commissioners, or members of the Indian Civil Service; (b) one or more Extra-Assistant Commissioners, or members of the Provincial Civil Service, usually natives of India, but including a few Europeans and Anglo-Indians and (c) by Tahsildars and naib Tahsildars., or members of the Subordinate service, who are nearly always natives of India. The district is divided for administrative purposes into tahsils, the average area of which is 1,500 square miles. In each village a lambardar, or representative of the proprietary body, is executive headman.

Justice.

The Court of the Judicial Commissioner is the highest court of appeal in Civil cases, and also the highest Court of criminal appeal and revision for the Central Provinces and Berar except in reference to proceedings against European British subjects and persons jointly charged with European British subjects: in such cases the High Court of the N. W. P. and the High Court of Bombay have jurisdiction over different parts of the Provinces.

The Court sits at Nagpur and consists of a Judicial Commissioner (who is appointed by the Governor-General-in-Council) and 3 permanent and 1 temporary Additional Judicial Commissioners of whom one at least must be an advocate of the Court or a Barrister or pleader of not less than 10 years' standing.

Subordinate to the Judicial Commissioner's Court are the District and Sessions Judges (11 in number) each of whom exercises civil and criminal jurisdiction in a Civil and Sessions district comprising one or more Revenue districts. The civil staff below the District and Sessions Judge consists of Sub-Judges and Munsiffs.

Local Government.

Municipal administration was first introduced under the Punjab Municipal Acts and the Municipality of Nagpur dates from 1864. Several revising Acts extend its scope. Viewed generally, municipal self-government is considered to have taken root successfully. The general basis of the scheme is the Local Board, for each tahsil and the District Council for each district. In Berar these bodies are called Local Boards and District Boards. The larger towns have municipalities, there being 60 such bodies in the Province.

A certain proportion of the Local Board members are village headmen, elected by their own class, others are elected representatives of the mercantile and trading classes and a third proportion, not exceeding ⅓ of the whole, are nominated by Government. The constitution of the District Councils is similar.

The District Councils in the C. P. have no power of taxation and Local Boards derive their funds in allotments from the District Councils. The District Boards in Berar have been lately invested with power to impose a special education cess.

The officers of the District Councils are frequently non-officials, but it is generally found convenient that the Tahsildar and Naib Tahsildar should be Chairman and Secretary of the Local Boards.

Rural education and sanitation are among the primary objects to which these bodies direct their attention and expenditure on famine relief is in the first instance a charge upon the District Council funds.

Finance.

The main source of Government income in the province has always been the land revenue, but under Mahratta rule many petty imposts were added in all branches of trade and industry and life in general. Thus there was a special tax on the marriage of Banias and a tax of a fourth of the proceeds of the sale of houses. The scheme of Provincial finance was introduced in 1871-72. Special settlements under this system have been necessitated in view of the special circumstances of the province and the recurrence of famine, which at the end of the 19th century caused a severe economic strain upon the province. The wave of prosperity which has spread over the country in the past 20 years has more than trebled the funds available for the administration, compared with what they were before the several years of scarcity, and the progress of the administration and of expenditure has increased correspondingly, without any increase of taxation under provincial heads.

Public Works.

The Public Works Department is controlled by two Chief Engineers, who are also Secretaries to the Government. There are three Superintending Engineers for roads and buildings and four for Irrigation. In 1892 a separate division of the Public Works Department was formed for the construction of roads and buildings in the Feudatory States but it has since been abolished. The expansion of the department and its work has been one of the most remarkable features of the administration in the past decade and a half, largely owing to the demands of a progressive age in regard to communications and new buildings. The Irrigation Branch of the P. W. D. represents a completely new departure. It was formerly the accepted view that the irregular surface of the country would make irrigation canals impossible and that the S. W. monsoon was so regular that it would pay better to relieve famine than to prevent it. Both conclusions have been reversed. Picked officers investigated projects for irrigation when the Irrigation Commission was appointed (1901) and canal and storage works have since been advanced with vigour. The Tandula, Wainganga, Mahanadi and Kharang canal projects are amongst the more important schemes, while an extensive network of minor protective works is being constructed throughout the Province.

Police.

The police force was constituted on its present basis on the formation of the Province, the whole of which, including the Cantonments and the Municipalities, is under one force. The strength is equal to one man per 10 square miles of area. The superior officers comprise an Inspector-General, whose jurisdiction extends over Berar, three Deputy Inspectors-General, for assistance in the administrative control and supervision of the Police force, including the Criminal Investigation Department, and the usual cadre of District Superintendents of Police, Assistant and Deputy Superintendents and subordinate officers. On railways special Railway Police are employed under the control of two Superintendents of Railway Police with headquarters at Raipur and Hoshangabad. A Special Armed Force of 600 men is distributed over the headquarters of seven districts, for use in dealing with armed disturbers of the peace in whatever quarter they may appear. There is a small force of Mounted Police. The Central Provinces has no rural police as the term is understood in other parts of India. The village watchman is the subordinate of the village headman and not a police official and it is considered very desirable to maintain his position in this respect.

Education.

The educational department was constituted in 1862 and the scheme then drawn up has remained the basis of the system of public education to the present day. The leading principles are that the department should content itself with the direct management of colleges and higher secondary schools, the training of teachers and inspection in work

in rural areas. The maintenance of rural schools should be left to the local authorities, every encouragement should be given to private philanthropy and no Government schools should be founded where there exist a sufficient number of institutions capable, with the assistance of the State, of supplying the local demand for instruction. At the head of the Department is the Director of Public Instruction, who has a staff of Deputy Director of Public Instruction, eight Inspectors and two Inspectresses for girls' schools. All these appointments are included in the Indian Educational Service. An Agency Inspector supervises the schools of the Feudatory States. The province has five colleges, the Robertson and Training Colleges at Jubbulpore, and the Morris and Hislop Colleges and the Victoria College of Science at Nagpur. Sanction has also been accorded to the establishment of a Government College at Amraoti, the buildings of which are under construction. The Agricultural Department maintains an Agricultural College at Nagpur. The Colleges are affiliated to Allahabad University but a demand has arisen for a local University.

After much preliminary discussion, a committee was appointed in July, 1914, to frame a scheme "which shall provide for a **University** of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the C. P. and Berar." The committee in their report, issued in 1915, proposed a University presenting some of the features of an affiliating University but possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. "For (says the report) it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for postgraduate degrees, but will embrace several departments of study in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the Universities can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole."

The committee said: "The University which we propose will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University at first at any rate will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail.

"We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate.

"After careful consideration, we have arrived at the conclusion that a university possessing the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the counsels of the University.

"We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch knowledge. As to the Medical and Engineering Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering."

The entire scheme is at present undergoing revision by committees of educationists and non-officials in the light of the Calcutta University Commission's report.

Until recent years, the demand for education, primary or secondary, was satisfied by a few institutions in the larger towns, while in the whole of the rural districts primary education

had to be pressed on an apathetic and even obstructive agricultural population. The new spirit of progress in recent years has quickened the public pulse and the efforts of Government to effect improved facilities have responded accordingly. Special grants from the Government of India budget surpluses in recent years have largely been devoted to assisting the District Councils to overtake their arrears of primary school building and liberal recurring grants have been made to Local Boards for the improvement of the pay of vernacular school masters. A large extension of normal schools and increase in the output of trained teachers, the development of manual training and the adaptation of primary schools to rural needs typify the administration's policy of consolidating the ground already won before embarking on further schemes of extension.

The Primary Education Bill passed by the local Legislative Council in March 1920 marks an important stage by giving local bodies power to introduce compulsory education in the areas under their jurisdiction.

Medical.

The medical and sanitary services of the province are respectively controlled by an Inspector-General of Civil Hospitals and a Director of Public Health. The medical department has progressed along comparatively stereotyped lines. A striking advance has been made in recent years with urban sanitation. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, opened in 1874, with accommodation for 119 in-patients; the Victoria Hospital at Jubbulpore, opened in 1886 and accommodating 121 in-patients; the Lady Dufferin Hospital at Nagpur and the Lady Elgin Hospital at Jubbulpore, these last two being for women and containing together accommodation for 72 in-patients. The province has one lunatic asylum at Nagpur. Vaccination is compulsory in some Municipal towns to which the Vaccination Act has been extended. The administration in 1913 sanctioned the opening of peripatetic dispensaries in unhealthy areas.

GOVERNOR.

The Hon. Sir Frank Sly, K.C.S I., I.C.S.

MEMBERS OF THE EXECUTIVE COUNCIL.

The Hon. Mr. B. P. Standen, C.S.I., C.I.E., I.C.S.

The Hon. Mr. Moropant V. Joshi.

MINISTERS.

The Hon. Mr. S. M. Chitnavis, I.S.O.

The Hon. Mr. N. K. Kelkar.

SECRETARIAT.

Chief Secretary, Mr. A. E. Nelson, O.B.E., I.C.S., J.P., M.L.C.

Financial Secretary, Mr. H. C. Gowan, I.C.S., M.L.C.

Revenue Secretary, Mr. E. Gordon, I.C.S., M.L.C.

Legal Secretary, D. G. Mitchell, I.C.S., M.L.C.

Under Secretaries, P. J. H. Stent, I.C.S., K. L. F. Armitage, I.C.S., and Hira Lal Varma.

Financial Asstt. Secretary. C. E. Higher (on leave); John Santos, B.A., Offg.

Secretary, Public Works Department (Irrigation Branch), Lieut.-Col. S. G. Rivett-Carnac, R.E., *(Roads and Buildings)*, Lt.-Col. H. de L. Pollard-Lowsley, C.M.G., C.I.E., D.S.O., R.E.

BERAR.

Commissioner, Mr. F. C. Turner, I.C.S., M.L.C.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, Mr. J. C. Evans.

Inspector-General of Police, K. W. Deighton.

Chief Conservator of Forests, Mr. B. B. Osmaston.

Inspector-General of Prisons, Lt.-Col. C. H. Bensley, I.M.S.

Inspector-General of Civil Hospitals, Col. W. Young, I.M.S., F.R.C.S.

Director, Public Health, Lt.-Col. T. G. N. Stokes, I.M.S.

Asstt. Director, Public Health, J. F. Lobo, D.P.H.

Commissioner of Excise, Mr. C. U. Wills, O.B.E., I.C.S., M.L.C.

Income Tax Commissioner, Mr. K. S. Jatar.

Accountant-General, Mr. J. Patch, O.B.E.

Postmaster-General, Mr. J. R. T. Booth, I.C.S.

Director of Agriculture, Mr. David Clouston, C.I.E.

Registrar of Co-operative Credit Societies, Mr. H. R. Crosthwaite, C.B.E., C.I.E.

CHIEF COMMISSIONERS.

Colonel E. K. Elliot	1860
Lieut.-Colonel J. K. Spence (*Officiating*) .	1862
R. Temple (*Officiating*)	1862
Colonel E. K. Elliot	1863
J. S. Campbell (*Officiating*)	1864
R. Temple	1864
J. S. Campbell (*Officiating*)	1865
R. Temple	1865
J. H. Morris (*Officiating*)	1867
G. Campbell	1867
J. H. Morris (*Officiating*) .. .. .. Confirmed 27th May 1870.	1868
Colonel R. H. Keatinge, V.C., C.S.I. (*Offg.*).	1870
J. H. Morris, C.S.I.	1872
C. Grant (*Officiating*)	1879
J. H. Morris, C.S.I.	1879
W. B. Jones, C.S.I.	1883
C. H. T. Crosthwaite (*Officiating*) .. Confirmed 27th January 1885.	1884
D. Fitzpatrick (*Officiating*)	1885
J. W. Neill (*Officiating*)	1887
A. Mackenzie, C.S.I.	1887
R. J. Crosthwaite (*Officiating*) .. .. Until 7th October 1889.	1889
J. W. Neill (*Officiating*)	1890
A. P. MacDonnell, C.S.I.	1891
J. Woodburn, C.S.I. (*Officiating*) .. .. Confirmed 1st December 1893.	1893

Sir C. J. Lyall, C.S.I., K.C.I.E. 1895
The Hon'ble Mr. D. C. J. Ibbetson, C.S.I. 1898
,, Sir A. H. L. Fraser, K.C.S.I. 1899
(*Officiating*) Confirmed 6th March 1902.
The Hon'ble Mr. J. P. Hewett, C.S.I., C.I.E. 1902
(*Officiating*) Confirmed 2nd November 1903.
The Hon'ble Mr. F.S.P. Lely, C.S.I., K.C.I.E. 1904
(*Officiating*) Confirmed 23rd Dec. 1904.
The Hon'ble Mr. J. O. Miller, C.S.I. .. 1905
S. Ismay, C.S.I. (*Officiating*) 1906
Until 21st October 1906.
F. A. T. Phillips (*Officiating*) 1907
Until 24th March 1907. Also from 20th
May to 21st November 1909
The Hon'ble Sir R. H. Craddock, K.C.S.I. 1907
The Hon'ble Mr. H.A. Crump, C.S.I. .. 1912
Sub. *pro tem.* from 26th January 1912 to 16th February.
The Hon'ble Mr. W. Fox-Strangways, C.S.I. 1912
(Sub *pro tem.*)
The Hon'ble Sir B. Robertson, K.C.S.I., C.I.E. 1912
,, Mr. Crump, C.S.I. (*Officiating*). 1914
,, Sir B. Robertson, K.C.S.I. .. 1914
,, Sir Frank George Sly, K.C.S.I., I.C.S. 1919

GOVERNOR.

The Hon'ble Sir Frank Sly, K.C.S.I. .. 1920

CENTRAL PROVINCES LEGISLATIVE COUNCIL.

A.—NOMINATED MEMBERS.

(I) *Officials.*

The Hon'ble Sir Gangadhar Madho Chitnavis, K.C.I.E., President.
Mr. Arthur Edward Nelson, O.B.E., I.C.S.
Mr. Hyde Clarendon Gowan, I.C.S.
Mr. Eyre Gordon, I.C.S.
Mr. A. J. Mayhew, C.I.E., I.E.S.
Mr. David George Mitchell, I.C.S.
Mr. Frederick Charles Turner, I.C.S.
Mr. C. U. Wills, I.C.S.

(II) *Non-Officials.*

Mr. George Paris Dick, C.I.E., Bar.-at-Law.
Mr. Vithal Bhaskar Kekre.
Mr. Neaz-ud-din Khan, Zamindar of Khujji.
Rai Bahadur Sir Bipin Krishna Bose, K.C.I.E.
Mr. Ganesh Akaji Gavai.
Mr. Kalicharan Ganuji Nandagaoli.
Rao Bahadur Keshao Vaman Bramha, Council Under-Secretary to the Minister for Education, etc.
Mr. William Pasley, Bar.-at-Law.

B.—ELECTED.

Mr. Anandi Prasad.
Mr. Saiyid Yasin, Council Under Secretary to the Finance Member.
Rao Sahib Nilkanth Rao Khalatkar.
The Hon'ble Rao Bahadur Narayan Krishna Kelkar.
Rao Bahadur Madho Rao Ganesh Deshpande.
Mr. Moro Rajaram Dixit, Bar.-at-Law, Deputy President.
Mr. C. B. Parakh, Council Under-Secretary to the Minister for Agriculture, etc.
Rao Sahib Bhagwant Atmaram Dhongdi.
Mr. Pralhad Ramchandra Deshpande.
Mr. Shrihari Deo Rao Deshpande.
Mr. H. D. Coggan.
The Hon'ble Mr. S. M. Chitnavis, I.S.O.
Chaturvedi Madan Mohan Pande.
Rai Sahib Ayodhia Prasad Bhargav, Bar.-at-Law, Council Under-Secretary to the Home Member.
Thakur Ratansingh.
Mr. Magan Lal.
Mr. Bansidhar Deodhya.
Mr. Kashi Prasad Pande.
Mr. Muhammad Ahmed, Bar.-at-Law.
Mr. Saiyid Muhammad Saleh, Bar.-at-Law.
Mr. Gajadhar Prasad Jaiswal.

Mr. Bala Prasad Pachoray.
Mr. Ram Prasad Awasthi.
Mr. Badri Das *alias* Badri Prasad.
Seth Moji Lal.
Rai Sahib Mathura Prasad, O.B.E.
Mr. Brijlal Pathak.
Mahant Ramsahaigir.
Mr. Lakshman Govind Katre.
Rao Sahib Ramchandra Vishnu Mahajani.
Nawab Mir Mehdi Ali Khan.
Mir Reayayat Ali.
Mirza Husaini Beg.
Rao Sahib V. G. Kulkerni.
Mr. Daulat Ekoba Patel.
Mr. J. N. Rodriques.
Mr. R. R. Jaiwant.
Mr. J. B. Deshmukh.
Rai Bahadur Ganesh Das Kundanmal.
Mr. Ram Rao Deshmukh, Bar.-at-Law.
Mr. Baji Rao Yeshawant Rao Deshmukh.
Mr. Dattatraya Krishna Kane.
Mr. Natesh Appaji Dravid.
Mr. T. S. Korde.
Mr. J. B. Sane.
Rao Sahib Sakharam Appa.
Seth Sheo Lal.
Mr. Faguwa Rohidas.
Mr. Sunder Lal Richaria.
Seth Bhaiyalal Chaudhri.
Mr. Ghulam Mohiuddin, Bar.-at-Law.

North-West Frontier Province.

The North-West Frontier Province, as its name denotes, is situated on the north-west frontier of the Indian Empire. It is in form an irregular strip of country lying north by east and south by west and may generally be described as the tract of country, north of Baluchistan, lying between the Indus and the Durand boundary line with Afghanistan. To the north it extends to the mountains of the Hindu Kush. From this range a long broken line of mountains runs almost due south, dividing the province from Afghanistan, until the Sulaiman Range eventually closes the south of the Province from Baluchistan. The greatest length of the province is 408 miles, its greatest breadth 279 miles and its total area about 39,000 square miles. The territory falls into three main geographical divisions: the Cis-Indus district of Hazara; the narrow strip between the Indus and the Hills, containing the Districts of Peshawar, Kohat, Banu and Dera Ismail Khan, and the rugged mountainous regions on the north and west between those districts and the border line of Afghanistan. Hazara and the four districts in the second division contain 13,418 square miles. The mountain regions, north and west, are occupied by tribes subject only to the political control of the Chief Commissioner in his capacity as Agent to the Governor-General. The area of this tract is roughly 25,500 square miles and in it are situated, from north to south, the political agencies severally known as the Malakand, Khyber, Kurram, Tochi and Wana Agencies. Each of the Deputy Commissioners of the five administered districts is responsible for the management of political relations with certain tribes or sections of the tribes across the frontier. A few hundred miles of the trans-border Territory are internally administered by the Political Agents, but the bulk of the trans-border population is free from any internal interference, so long as offences are not committed and so long as the tribes observe the conditions on which allowances are paid to many of them.

The area of the Province is a little more than half that of Bombay (excluding Sind and Aden) and amounts to more than three-fifths of the size of England without Wales. The density of population throughout the Province equals 130 persons to a square mile, but in the more favoured portions the pressure of population is much greater. In the Hazara District there are 208 persons to a square mile and in the trans-Indus plains tract the number is 156. The key to the history of the people of the N.-W. F. P. lies in the recognition of the fact that the valley of Peshawar was always more closely connected politically with Eastern Iran than with India, though in pre-Mahomedan times its population was mainly Indian by race. Early history finds the Iranians dominating the whole Indus valley. Then came the Greek invasion under Alexander the Great, in B.C. 327, then the invasions of the Sakas, and of the White Huns, and later, the two great waves of Muhammadan invasion. Last came the Sikh invasion, beginning in 1818. The Frontier Territory was annexed by the British in 1849 and placed under the control of the Punjab Government. Frequent warfare occurred with the border tribes. The most serious phases of these disturbances were the war provoked by the aggression of Afghanistan in 1919 and the protracted punitive operations against the Waziris in 1919-1920.

The division of the Frontier Province from the Punjab was frequently discussed, with the double object of securing closer and more immediate control and supervision of the Frontier by the Supreme Government and of making such alterations in the personnel and duties of frontier officials as would tend to the establishment of improved relations between the local British representatives and the independent tribesmen. The province was eventually removed from the control of the Punjab administration in 1901. To it was added the political charge of Dir, Swat and Chitral, the Political Agent of which had never been subordinate to the Punjab. The new Province was constituted under a Chief Commissioner and Agent to the Governor-General, with headquarters at Peshawar, in direct communication with the Government of India in the Foreign Department. In political questions there is no intermediary between the Chief Commissioner and the local officer; an arrangement designed to secure both prompt disposal of references and the utilisation of the expert knowledge of frontier conditions for which the head of the administration is selected.

The People.

The total population of the N.W.F.P. (1921) is 5,076,476, made up as follows:—

Hazara	622,349
Trans-Indus Districts.. ..	1,628,991
Trans-Border Area	2,825,136

This last figure is estimated. There are only 561·3 females per 1,000 males in the towns, and 872·2 females per 1,000 males in rural areas.

This disproportion of the sexes cannot at present be explained in the N.-W.F.P. any more than in other parts of Northern India, where it also appears. The discrepancy is greater here than in any other Province of India. There is no ground for believing that the neglect of girls in infancy has any effect in causing the phenomenon. On the other hand, the female population has to face many trials which are unknown to men. The evils of unskilled midwifery and early marriage are among them. Both the birth and death-rates of the Province are abnormally low. The birth rate in the administered districts, according to the last available official reports, is 35·1 and the death-rate 33·3. There were 122·5 male births for every 100 females. It is recognised that in this matter, and in regard to population generally, the registration of females may be defective, inasmuch as the Pathan, for whatever reasons, regards the birth of a daughter as a misfortune, the less said about which the better. The population is naturally increasing, but emigration reduces the net result.

The dominant language of the Province is Pashtu and the population contains several lingual strata. The most important sections of the population, both numerically and by social position, are the Pathans. They own

a very large proportion of the land in the administered districts and are the ruling race, of the tribal area to the west. There is a long list of Pathan, Baluch, Rajput and other tribal divisions. Gurkhas have recently settled in the Province. The Mahomedan tribes constitute almost the whole population, Hindus amounting to only 5 per cent. of the total and Sikhs to a few thousands. The occupational cleavage of the population confuses ethnical divisions.

Under the North-West Frontier Province Law and Justice Regulation of 1901, custom governs all questions regarding successions, betrothal, marriage, divorce, the separate property of women, dower, wills, gifts, partitions, family relations such as adoption and guardianship, and religious usages and institutions, provided that the custom be not contrary to justice, equity or good conscience. In these matters the Mahomedan or Hindu law is applied only in the absence of special custom.

Climate, Flora and Fauna.

The climatic conditions of the N.-W.F.P., which is mainly the mountainous region, but includes the Peshawar Valley and the riverame tracts of the Indus in Dera Ismail Khan District, are extremely diversified. The latter district is one of the hottest areas of the Indian continent, while on the mountain ranges the weather is temperate in summer and intensely cold in winter. The air is generally dry and hence the annual ranges of temperature are frequently very large. The Province has two wet seasons, one the S.-W. Monsoon season, when moisture is brought up from the Arabian Sea and the Bay of Bengal: the other in winter, when storms from Mesopotamia, Persia and the Caspian Districts bring widespread rain and snowfall. Both sources of supply are precarious and not infrequently either the winter or the summer rainfall fails almost entirely. The following description of the Daman, the high ground above the Indus, stretching across Dera Ismail Khan to the mountains on the west, occurs in an account written some years ago by Captain Crostwaite: "Men drink once a day and the cattle every second day. Washing is an impossible luxury. . . . It is possible in the hot weather to ride thirty miles and neither hear a dog bark nor see the smoke of a single fire." With the exception of the Kunhar River, in Hazara, which flows into the Jhelum, the whole territory drains into the Indus. The flora of the Province varies from the shrubby jungle of the south-eastern plains to barren hills, pine forests and fertile mountain valleys. Tigers used to abound in the forests but are now quite extinct; leopards, hyenas, wolves, jackals and foxes are the chief carnivora. Bear, deer and monkeys are found; a great variety of fish is caught in the Indus.

The mountain scenery is often magnificent. The frontier ranges contain many notable peaks of which the following are the principal:

Takht-i-Sulaiman, Sulaiman Range, in Dera Ismail Khan, 11,292 feet.

Pir Ghal, Sulaiman Range, in Mahsud Waziristan, 11,583 feet.

Sika Ram, in the Safed Koh, in the Kurram Agency, 15,621 feet.

Kagan Peaks of the Himalayas, in the Hazara District. 10,000 to 16,700 feet.

Istragh Peak (18,900 ft.), Kachin Peak (22,641 ft.), Tirich Mir (25,426 ft.), all in the Hindu Kush, on the northern border of Chitral Agency.

Trade and Occupations.

The population derives its subsistence almost wholly from agriculture. The Province is practically without manufactures. There is no considerable surplus of commercial products for export. Any commercial importance which the province possesses it owes to the fact that it lies across the great trade routes which connect the trans-border tribal territories and the marts of Afghanistan and Central Asia with India, but the influence of railways is diminishing the importance of these trading interests. The travelling traders (or Powindahs) from the trans-frontier area have always pursued their wanderings into India and now, instead of doing their trading in towns near the border, carry it by train to the large cities in India. Prices of agricultural produce have in recent years been high, but the agriculturists, owing to the poverty of the means of communication, have to some extent been deprived of access to Indian markets and have therefore been unable to profit by the rates prevailing. On the other hand, high prices are a hardship to the non-agricultural classes. The effects of recent extensions of irrigation have been important. Land tenures are generally the same in the British administered districts as in the Punjab. The cultivated area of the land amounts to 32 per cent. and uncultivated to 68 per cent.

The work of civilisation is now making steady progress. Relations with the tribes have improved, trade has advanced, free medical relief has been vastly extended, police administration has been reformed and the desire of people for education has been judiciously and sympathetically fostered. In the British administered districts 19 per cent. males and 7 per cent. females of the total population are returned as literates. The figures for males denote a very narrow diffusion of education even for India. Those for females are not notably low, but they are largely affected by the high literacy amongst Sikh women, of whom 13·3 per cent. are returned as literate. The inauguration of a system of light railways throughout the Province, apart from all considerations of strategy, must materially improve the condition of the people and also by that means strengthen the hold of the administration over them. The great engineering project of the Upper Swat River Canal, which was completed in 1914, and the lesser work of the Paharpur Canal, also completed a few years ago, will bring ease and prosperity to a number of peasant homes.

Administration.

The administration of the North-West Frontier Province is conducted by the Chief

Commissioner and Agent to the Governor-General in Council. His staff consists of—

(1) Officers of the Political Department of the Government of India.

(2) Members of the Provincial Civil Service.

(3) Members of the Subordinate Civil Service

(4) Superintendents and Assistant Superintendents of Police.

(5) Officers recruited for the service of departments requiring special knowledge—Militia, Engineering, Education, Medicine and Forestry.

The cadre posts reserved for officers coming under the first head above are :—

Administration.	Chief Commissioner & Agent to the Governor-General		
	Secretary		
	Under Secretary		5
	Personal Assistant		
	Revenue Commissioner and Revenue Secretary		
	Resident in Waziristan...		1
	Deputy Commissioners	.. 5	
	Political Agents	.. 5	12
	District Judges	.. 2	
	Assistant Commissioners and Assistant Political Agents		13
Judicial Commr.'s Court and Divisional Judges.	One Judicial Commissioner.		
	Two Divisional and Sessions Judges.		4
	One Additional ditto.		

The districts under the Deputy Commissioners are divided into from two to five subcollectorates, in charge of tahsildars, who are invested with criminal and civil and revenue powers, and are assisted by naib-tahsildars, who exercise only criminal and revenue powers. Some sub-divisions are in charge of Assistant or Extra Assistant Commissioners. The village community characteristic of some parts of India is not indigenous among the Pathans. Its place as a social unit is to some extent taken by the tribe, which is held together by the ties of kinship and ancient ancestry, real or imaginary. Modern municipal local government has been introduced in the towns. There are also district boards. The district is the unit for police, medical and educational administration and the ordinary staff includes a District Superintendent of Police, a Civil Surgeon, who is also the Superintendent of Jail and a District Inspector of Schools. The Province forms a single educational circle and only possesses one forest division, that of Hazara. There are four divisions of the Roads and Building Branch of the Public Works Department, each under an Executive Engineer. The Irrigation Department of the P. W. D. is in charge of a Chief Engineer, Irrigation, who is also *ex-officio* Secretary to the Chief Commissioner. The administration of the civil police force of the districts is vested in an Inspector-General. There is a special force of Frontier Constabulary. The revenue and expenditure of the Province are wholly Imperial. Of the Agencies only Kurram and Tochi Valley pay land revenue to the British Government. The revenue administration of all five administered districts is controlled by the Revenue Commissioner. For the administration of civil and criminal justice there are two Civil and Sessions divisions, each presided over by a Divisional and Sessions Judge. The Judicial Commissioner is the controlling authority in the Judicial branch of the administration, and his Court is the highest criminal and appellate tribunal in this Province. The principal officers in the present Administration are :—

Agent to the Governor General and Chief Commissioner, The Hon'ble Sir Alfred Hamilton-Grant, K.C.I.E., C.S.I., I.C.S., (Sir John L. Maffey, K.C.V.O., C.S.I. C.I.E., I.C.S., acting).

Resident Waziristan, J. A. C. Fitzpatrick, C.I.E., C.B.E., I.C.S.

Judicial Commissioner, F. P. Rennie, I.C.S.

Revenue Commissioner, H. N. Bolton, C.S.I., C.I.E., I.C.S.

Secretary to Chief Commissioner, H. A. F. Metcalfe, I.C.S.

Under Secretary to Chief Commissioner, Major R. J. Macnabb.

Assistant Financial Secretary to Chief Commissioner, Lala Chuni Lal.

Indian Personal Assistant to Chief Commissioner, Khan Bahadur Sadulla Khan.

Secretary, Public Works Department, Buildings and Roads Branch Col. H. A. D Fraser, R.E.

Secretary, Public Works Department, Irrigation Branch, N. White.

Deputy Conservator of Forests, R. Parnell.

Chief Medical Officer, Lieut.-Col. W. M. Anderson, C.I.E., I.M.S.

Inspector-General of Police, E. W. Tomkins, C.I.E., O.B.E.

Commandant, Frontier Constabulary, R. C. Boyle, C.I.E.

Director of Public Instruction, C. E. W. Jones, M.A., (J. R. Cornah, B.A., acting).

Superintendent, Archaeological Survey, H. Hargreaves.

Divisional and Sessions Judges, J. H. R. Fraser, I.C.S., (Peshawar), K. B. Muhd. Abdul Karim Khan, I.S.O., M.B.E.,(Derajat), T. B. Copeland, Additional Sessions Judge, (Peshawar).

Political Agents.

Major W. G. Neale, Dir, Swat and Chitral
Lt.-Col. W. J. Keen, C.I.E., C.B.E., Khyber.
Mr. F. V. Wylie, I.C.S., Tochi.
Lt.-Col. R. Garrett, Kurram.

Deputy Commissioners.

Lt. Col. E. H. S. James, C.I.E., Hazara.

Major C. P. Crosthwaite, O.B.E., Peshawar.

Major W. A. MacD. Garstin, Bannu.

Major M.E. Rae, T.A. (*offg.*) Dera Ismail Khan.

Major C. E. Bruce, C.I.E., O.B.E., Kohat.

Former Chief Commissioners.

Lieut.-Col Sir Harold Deane, K.C.S.I., Died 7th July 1908.

Lieut.-Col. Sir George Roos-Keppel, G.C.I.E., K.C.S.I., to 9th September 1919.

Assam.

The Province of Assam, 61,682 square miles in area, includes the Assam Valley Division, the Surma Valley and Hills Division and the State of Manipur. It owes its importance to its situation on the north-east frontier of India. It is surrounded by mountainous ranges on three sides while on the fourth (the west) lies the Province of Bengal on to the plains of which debouch the two valleys of the Brahmaputra and the Surma which form the plains of Assam. These two valleys are separated from each other by the Assam Range, which projects westward from the hills on the eastern border.

Population.

The total population of the province in 1911 was 7,598,861, of whom 1½ millions were Mahomedans, 3½ millions Hindus and 1¼ millions Animists. 46 per cent. of the population speak Bengali, 22 per cent. speak Assamese. other languages spoken in the province are Hindi, Uriya and a great variety of languages classified under the general heading of the Tibeto-Chinese languages. Owing to the great areas of waste and rivers the density of the province is only 115, which compared with that of most other parts of India, is low, but is more than double that of Burma.

Agricultural Products.

It has agricultural advantages for which it would be difficult to find a parallel in any part of India, climate, soil, rainfall and river systems all being alike favourable to cultivation. Rice is the staple food crop, nearly 5 million acres being devoted to this crop. In 1917-18 the outturn of rice was 1,584,924 tons. Except in the Himalayan Terai irrigation is unnecessary. Jute and tea are the most important crops grown for export; the area under jute in 1917-18 being 100,324 acres that under tea about 399,690 acres. The number of tea gardens is 796, the production being about 243 million lbs. Wheat and tobacco are also grown and about 30 square miles are devoted to sugarcane. The total area of 'reserved' forest is about 5,381 square miles and the unclassified state forests cover about 18,509 square miles.

Meteorological Conditions.

Rainfall is everywhere abundant, and ranges from 93 to 124 inches. The maximum is reached at Cherrapunji in the Khasi Hills, which is one of the wettest places in the world, having a rainfall of 458 inches. The temperature ranges fron 59° at Sibsagar in January to 84° in July. Earthquakes of considerable severity have taken place, by far the worst being that which occurred in 1897.

Land Tenures.

Most of the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goalpara and of the more densely populated portions of Sylhet was however included in the permanent settlement of Bengal; and the system of land tenure in Cachar, and the existence of large estates on privileged rates of revenue in Kamrup have tended to produce a tenant class which at the 1901 census amounted to more than one-third of the total number of persons supported by agriculture. In the 1911 census a very marked increase in tenancy throughout the Province is shown.

The Assam Labour and Emigration (Amendment) Bill was passed on the 24th March 1915. The Act carries with it the abolition of the recruiting contractor and the creation of Labour Bureau to supervise recruiting.

Mines and Minerals.

The only minerals in Assam worked on a commercial scale are coal, limestone and petroleum oil. The most extensive coal measures are in the Naga Hills district, where about 300,000 tons are raised annually and used mainly by the river steamers. Limestone is quarried in the Khasi and Jaintia Hills, in Sylhet, and in the Gare hills. Petroleum is worked only in Lakimpur.

An account of the petroleum occurrences in Assam was recently published in the memoirs of the Geological Survey of India. It states that the petroleum localities in this province are confined to a curved belt of country along the basins of the Brahmaputra and Surma. This belt is traceable over a distance of some 800 miles from N.E. Assam through Kachar and Chittagong to the Arakan coast, where it has a S.S.E. trend. It is roughly concentric with the trend of the Burmese oil belt, the distance between the two varying from 70 to 150 miles.

Manufactures and Trade.

Silk is manufactured in the Assam Valley, the weaving being done by the women. Cotton weaving is also largely practised by the women, and almost every house contains a loom; the cloth is being gradually displaced by imported goods of finer texture and colour. Boat building, brass and metal and earthenwares, tea manufacture and limestone burning are the other industries apart from agriculture, which itself employs about 84 per cent. of the population. Assam carries on a considerable **trade** with the adjoining foreign tribes and countries.

Communications.

The trade of Assam is chiefly carried by river, but increasing use is being made of the Assam Bengal Railway which runs from the port of Chittagong to Silchar at the eastern end of the Surma Valley. A branch of that line runs along the south of the Assam Valley from Gauhati to Tinsukia a station on the Dibru-Sadiya Railway, and is connected with the Surma Valley branch by a line that pierces the North Cachar Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. The Eastern Bengal State Railway connects Assam with the Bengal system *via* the valley of the Brahmaputra. The excellence of its water communication makes Assam less dependent upon roads than other parts of India; but in recent years the road system has been developed and there is a trunk road through the whole length of the Brahmaputra Valley and an excellent road from Gauhati to Shillong. A large fleet of

steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh.

Education.

There are in the Province at present 4,619 educational institutions including two Arts Colleges with 221,469 students. Of the total population 333,672 are returned as literate. The distribution of literacy naturally varies considerably throughout the Province. The large number of immigrant coolies and of aboriginal tribes tends to lower the proportion of literates in the Brahmaputra Valley, and a comparatively high standard of literacy in the Hills is due mainly to the progress of education amongst the Khasis of whom a large proportion have been converted to Christianity. Amongst the Animists in the Hills the Lushais seem to have an extraordinary keenness for learning, which is the more remarkable, because the administration of their district dates from quite recent times.

Administration.

The province of Assam was originally formed in 1874 in order to relieve the Lieutenant-Governor of Bengal of part of the administration of the huge territory then under him. In 1903, as the result of further deliberations, it was decided to add to the small Province of Assam the eastern portion of its unwieldy neighbour and to consolidate those territories under a Lieutenant-Governor. The Province of Eastern Bengal and Assam as then constituted was again broken up on the 1st of April, 1912: the Eastern Bengal Districts were united with the Bengal Commissionerships of Burdwan and the Presidency to form the Presidency of Bengal under a Governor-in-Council, Bihar, Chota Nagpur and Orissa were formed into a separate province, while the old Province of Assam was re-constituted under a Chief Commissioner.

Under the Indian Reforms Act of 1919 the Province was raised in status to that of administration by a Governor-in-Council and was thereby ranked, with certain minor provisions to suit its undeveloped character with the older major provinces of India. The exact nature of this change in its constitution, with the powers of the Governor, the Council, the Ministers and the Legislative Council is indicated in the general section The Provincial Governments (*q. v.*). There is also set out the financial arrangement between the Government and the Provinces. The new constitution came into force in December 1920.

The capital is Shillong, a town laid out with great taste and judgment among the pine woods on the slopes of the Shillong Range which rises to a height of 6,450 feet above the sea. It was destroyed in the earthquake of 1897 and has been rebuilt in a way more likely to withstand the shocks of earthquake.

GOVERNOR

Sir William Marris, K.C.S.I., K.C.I.E.

EXECUTIVE COUNCIL.

William James Reid, C.S.I.

Abdul Majid, C.I.E.

SECRETARIAT.

Private Secretary, Major R. C. B. Williams.

Chief Secretary, A. W. Botham.

Second Secretary, A. R. Edwards.

Secretary, Public Works Department, J. N. Taylor, C.I.E.

Inspector General of Registration, J. Hezlett, I.C.S.

Judge, O. M. Martin.

Director of Public Instruction, J. R. Cunningham.

Inspector-General of Police, W. C. M. Dundas, C.I.E.

Sanitary Commissioner, Major T. C. M. Young, M.B., I.M.S.

Comptroller, Financial Department, Hanumantha Bhimsena Rau, B.A.

Superintendent and Remembrancer of Legal Affairs, Arthur Millor.

Director of Land Records and Agriculture, J. McSwiney.

Conservators of Forests, F. Trafford and F. H. Todd.

Senior Inspector of Factories, R. P. Adams.

Chief Commissioners of Assam.

Colonel R. H. Keatinge, C.S.I.	1874
Sir S. C. Bayley, K.C.S.I.	1878
C. A. Elliot, C.S.I.	1881
W. E. Ward	1883
Dennis Fitzpatrick, C.S.I.	1887
J. Westland, C.S.I.	1889
J. W. Quinton, C.S.I.	1889
Brig.-General Sir H. Collett, K.C.B. ..	1891
W. E. Ward, C.S.I.	1891
C. J. Lyall, C.S.I.	1894
H. J. S. Cotton, C.S.I.	1896
J. B. Fuller, C.I.E.	1900
J. B. Fuller, C.I.E.	1902
C. W. Bolton, C.S.I.	1903
Note.—The Chief Commissionership of Assam was revived 1st April 1912	
Sir Archdale Earle, K.C.I.E.	1912
Sir Nicholas Dodd Beatson Bell, K.C.I.E., C.S.I	1918

GOVERNORS OF ASSAM.

Sir Nicholas Dodd Beatson Bell, 1920.

Sir William Marris, 1921.

ASSAM LEGISLATIVE COUNCIL.

The Hon'ble J. C. Arbuthnott, C.I.E., I.C.S., *President.*

COUNCILLORS.

The Hon'ble Mr. William James Reid, C.S.I., I.C.S., *Ex-officio.* The Hon'ble Mr. Abdul Majid, C.I.E., Bar.-at-Law., *Ex-officio.*

NOMINATED MEMBERS.

Officials.

Mr. Arthur William Botham, C.I.E.

Mr. Arthur Richard Edwards.

Mr. John Norman Taylor, C.I.E.

Non-officials.

Dr. Hugh Gordon Roberts.

Mr. Rajendra Narayan Chaudhuri, Barrister-at-Law.

Kumar Chandra Narayan Singh.

Rai Sahib Manomohan Lahiri.

Babu Radha Binod Das.

Sardar Bahadur Anjab Ali Khan.

Khan Sahib Alauddin Chaudhuri.

Mr. Douglas Stuart Withers.

Babu Jangin Sangma Laskar, M.B.E.

ELECTED MEMBERS.

Rev. James Joy Mohan Nichols Roy.

Rai Sahib Bipin Chandra Deb Lashkar.

Babu Har Kishore Chakrabatti.

Rai Bahadur Nalini Kanta Ray Dastidar.

Rai Sahib Amarnath Ray.

Babu Baikuntha Nath Ray.

Rai Bahadur Promode Chandra Dutta.

Babu Krishna Sundar Dam.

Babu Ramani Mohan Das.

Babu Biraj Mohan Dutta.

Srijut Dhairya Narayan Das.

Rai Bahadur Krishna Chandra Chaudhuri.

Srijut Lohit Chandra Nayak.

Srijut Dalim Chandra Borah.

Srijut Kumud Ram Bora.

Srijut Bishnu Charan Borah.

Rai Sahib Radhika Prosad Barua.

Srijut Siva Prosad Barua.

Rai Bahadur Ghanasyam Barua.

Srijut Nilmoni Phukan.

Rai Sahib Padmanath Gohain Barua.

Maulavi Rashid Ali Lashkar.

Khan Bahadur Syed Abdul Majid.

Maulavi Abdul Rahim Chaudhuri.

Maulavi Monowarali.

Khan Bahadur Muhamad Bakht Mazumdar.

Maulavi Saiyid Nurur Rahman.

Maulavi Abdul Khalique Chaudhuri.

Haji Muhammad Abdul Ahad Chaudhuri.

Khan Sahib Abdul Latif, M.B.E.

Munshi Saflur Rahman.

Khan Bahadur Mahibuddin Ahmad.

Maulavi Ruknuddin Ahmad, B.L.

Mr. Arthur Lambert Playfair.

Mr. Walter Herrick Woodward.

Mr. Archibald Moffat.

Major Henry Benedict Fox.

Mr. Arthur John Grinfiled Cresswell.

Mr. John Alexander Fraser.

Baluchistan.

Baluchistan is an oblong stretch of country occupying the extreme western corner of the Indian Empire. It is divided into three main divisions: (1) British Baluchistan with an area of 9,476 square miles consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories with an area of 44,345 square miles composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and placed directly under British officers; and (3) the Native States of Kalat and Las Bela with an area of 78,434 square miles. The Province embraces an area of 134,638 square miles and according to the census of 1921 it contains 800,678 inhabitants, divided between the administered districts 421,679 and States 378,999.

The country, which is almost wholly mountainous, lies on a great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed the drainage of which enters the Indus on the east and the Arabian Sea on the south while on the north and west it makes its way to the inland lakes which form so large a feature of Central Asia. Rugged, barren, sun-burnt mountains, rent by high chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous sight. But this is redeemed in places by level valleys of considerable size in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised.

The political connection of the British Government with Baluchistan commenced from the outbreak of the First Afghan War in 1839; it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachi, Quetta and Mastung were handed over to the Amir of Afghanistan and Political Officers were appointed to administer the country. At the close of the First Afghan War, the British withdrew and these districts were assigned to the Khan of Kalat. The founder of the Baluchistan Province as it now exists was Sir Robert Sandeman who broke down the close border system and welded the Baluch and Brahui Chiefs into a close confederacy. In the Afghan War of 1879 Pishin, Shorarud. Sibi, Zawara Valley and Thal-Chotiali were handed over by Yakub Khan to the British Government and retained at Sir Robert Sandeman's strenuous insistence.

Industries.

Baluchistan lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shahrig which has the heaviest rainfall, records no more than 11¼ inches in a year. In the highlands few places receive more than 10 inches and in the plains the average rainfall is about 5 inches, decreasing in some cases to 3. The majority of the indigenous population are dependent for their livelihood on agriculture, provision and care of animals and transport. The Majority of Afghan and the Baluch, as a rule, cultivate their own lands. The Brahuis dislike agriculture and prefer a pastoral life. Previous to the advent of the British life and property were so insecure that the cultivator was fortunate if he reaped his harvest. The establishment of peace and security has been accompanied by a marked extension of agriculture which accounts for the increase in the numbers of the purely cultivating classes. The Mekran Coast is famous for the quantity and quality of its fish and the industry is constantly developing. Fruit is extensively grown in the highlands and the export is increasing.

Education is imparted in 329 schools with 7,102 scholars. There is a distinct desire for education amongst the more enlightened headmen round about Quetta-Pishin and other centres where the Local Government with its officers stays at certain seasons, such as Sibi and Ziarat; but on the whole education or the desire of it has made little or no advance in the outlying districts. The mineral wealth of the Province is believed to be considerable, but cannot be exploited until railways are developed. Coal is mined at Khost on the Sind-Pishin railway and in the Bolan Pass. Chromite is extracted in the Zhob District near Hindu-bagh. Lime-stone is quarried in small quantities.

Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. Next in rank comes the Revenue Commissioner who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration and exercises the functions of a High Court as Judicial Commissioner of the Province. The keynote of administration in Baluchistan is self-government by the tribesmen, as far as may be, by means of their Jirgas or Councils of Elders along the ancient customary lines of tribal law, the essence of which is the satisfaction of the aggrieved and the settlement of the feud, not retaliation on the aggressor or the vindictive punishment of a crime. The district levies which normally numbered 2,300 odd play an unobtrusive but invaluable part in the work of the Civil Administration not only in watch and ward and the investigation of crime, but also in the carrying of the mails, the serving of processes and other miscellaneous work. In addition to these district levies there are ordinarily two irregular Corps in the Province; the Zhob Levy Corps and the Makran Levy Corps. Their combined strength in the latest returns was 953 cavalry and 892 infantry. The Province does not pay for itself and. receives large subsidies from the Imperial Government. The receipts and expenditure roughly balance each other at 29 lakhs. The land revenue demanded is about Rs. 12 lakhs annually.

ADMINISTRATION.

Agent to the Governor-General and Chief Commissioner, The Hon'ble Lt.-Col. Sir Armine Dew, K.C.I.E., C.S.I.

Revenue and Judicial Commissioner, Lt.-Col. H. Stewart, C.I.E., I. A.

Secretary, Public Works Department, Col. L. H. Close, C.M.G.

Secretary to the Agent to the Governor-General and Chief Commissioner, Mr. H. D. G. Law, M.A., I.C.S.

Political Agent, Zhob, Major R. H. C. Trench.

Political Agent, Kalat and Bolan Pass, Major W. G. Hutchinson, O.B.E.

Assistant for Mekran to the Political Agent in Kalat and ex-officio Commandant, Mekran Levy Corps, Captain C. E. U. Bremner.

Political Agent and Deputy Commissioner, Quetta, Mr. C. P. Skrine, I.C.S.

Assistant Political Agent and Assistant Commissioner, Quetta, Capt. C. G. Snelling.

Political Agent, Chagai, Capt. H. W. C. Robson.

Political Agent and Deputy Commissioner, Sibi, Lt.-Col. T. H. Keyes, C.M.G., C.I.E.

Assistant Political Agent, Sibi, Captain W. F. Campbell, I.A.

Political Agent, Loralai, Major C. T. Daukes.

Residency Surgeon and Chief Medical Officer, Major H. H. Thorburn, I.M.S.

Civil Surgeon, Sibi, Captain J. N. Turner, I. S. M. D.

Assistant Political Agent, Zhob, Captain J. C. Johnson.

Assistant Political Agent, Kalat, R. B. Lala Lachhman Das.

Assistant Political Agent, Jhalawan and Las Bela, K. B. Seth Kaikobad.

Civil Surgeon, Quetta, Captain J. B. Hance, I.M.S.

ANDAMAN AND NICOBAR ISLANDS.

This is a group of islands in the Bay of Bengal of which the headquarters are at Port Blair, by sea 780 miles from Calcutta, 740 miles from Madras and 360 miles from Rangoon, with which ports there is regular communication.

The land area of the islands under the administration is 3,143 square miles, namely, 2,508 square miles in the Andamans and 635 square miles in the Nicobars. The total population of the islands was returned in the census of 1911 as 26,459. The Islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands who is also the Superintendent of the Penal Settlement. The penal settlement, which was established in 1858, is the most important in India

Chief Commissioner of Port Blair, Lieut.-Col. H. C. Beadon, C.I.F.

Acting Commandant and District Superintendent of Police, Major F. C. Sanderson.

Medical Superintendent, Cellular and Female Jails, Major A. S Leslie, I.M.S

COORG.

Coorg is a small petty Province in Southern India west of the State of Mysore. Its area is 1,582 square miles and its population 174,976. Coorg came under the direct protection of the British Government during the war with Sultan Tipu of Seringapatam. In May 1834, owing to misgovernment, it was annexed. The Province is directly under the Government of India and administered by the Chief Commissioner of Coorg who is the Resident in Mysore with his headquarters at Bangalore. In him are combined all the functions of a local government and a High Court. The Secretariat is at Bangalore where the Assistant Resident is styled Secretary to the Chief Commissioner of Coorg. In Coorg his chief authority is the Commissioner whose headquarters are at Mercara and whose duties extend to every branch of the administration. The chief wealth of the country is agriculture and especially the growth of coffee. Although owing to over-production and insect pests coffee no longer commands the profits it once enjoyed, the Indian output still holds its own against the severe competition of Brazil. The bulk of the output is exported to France.

Resident and Chief Commissioner, Coorg, Lt.-Col. S. G. Knox, C.I.E., I.C.S.

AJMER-MERWARA.

Ajmer-Merwara is an isolated British Province in Rajputana. The Agent to the Governor-General in Rajputana administers it as Chief Commissioner. The Province consists of two small separate districts, Ajmer and Merwara, with a total area of 2,711 square miles and a population of 501,395. At the close of the Pindari war Daulat Rao Scindia, by a treaty dated June 25, 1818, ceded the district to the British. Fifty-five per cent. of the population are supported by agriculture, the industrial population being principally employed in the cotton and other industries. The principal crops are maize, millet, barley, cotton, oil-seeds and wheat.

Officiating Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer-Merwara, The Hon. Mr. R. E. Holland, C.I.E.

Aden.

Aden was the first new territory added to the Empire after the accession of Queen Victoria. Its acquisition in 1839 was the outcome of an outrage committed by the local Fadhli chief upon the passengers and crew of a British buggalow wrecked in the neighbourhood. Various acts of treachery supervened during the negotiations regarding the buggalow outrage and Aden was captured by a force sent by the Bombay Government under Major Baillie. The act has been described as one of those opportune political strokes which have given geographical continuity to British possessions scattered over the world.

Aden is an extinct volcano, five miles long and three broad, jutting out to sea much as Gibraltar does, having a circumference of about 15 miles and connected with the mainland by a narrow isthmus of flat ground This is nearly covered at one part at high spring tides, but the causeway and aqueduct are always above, though sometimes only just above, water. The highest peak on the wall of precipitous hills that surrounds the old crater which constitutes Aden is 1,775 feet above sea level. Rugged spurs, with valleys between, radiate from the centre to the circumference of the crater. A great gap has been rent by some volcanic disturbance on the sea surface of the circle of hills and this opens to the magnificent harbour. The peninsula of Little Aden, adjacent to Aden proper, was obtained by purchase in 1868 and the adjoining tract of Shaikh Othman, 39 square miles in extent, was subsequently purchased when, in 1882, it was found necessary to make provision for an over-flowing population.

Attached to the settlement of Aden are the islands of Perim, an island of 5 square miles extent in the Straits of Bab-el-Mandeb, in the entrance to the Arabian Sea ; Sokotra island, at the entrance to the Gulf of Aden, in the Arabian Sea, acquired by treaty in 1886 and 1,382 miles in extent ; and the five small Kuria Muria islands, ceded by the Imam of Maskat in 1854 for the purpose of landing the Red Sea cable, and otherwise valuable only for the guano deposits found upon them. They are off the Arabian coast about two-thirds of the way from Aden to Maskat. The whole extent of the Aden settlement, including Aden, Little Aden, Shaikh Othman and Perim, and subject to post-war adjustments, is approximately 80 miles. The 1911 census showed Aden, with Little Aden, Shaikh Othman, and Perim to have a population of 46,165. The population of Perim is a matter of a few hundreds, largely dependent on the Coal Depot maintained there by a commercial firm. That of Sokotra is 12,000, mostly pastoral and migratory inland, fishing on the coast.

Strategic Importance.

Aden's first importance is as a naval and military station of strategic importance. This aspect was ably discussed by Colonel A. M. Murray, in his "Imperial Outposts." He points out that Aden is not a naval base in the same sense that Gibraltar, Malta and Hong-Kong were made, but a *point d'appui*, a rendezvous and striking point for the fleet. It was seized in 1839 because of its usefulness as a harbour of refuge for British ships and from a strategist's point of view this is its primary purpose and the *raison d'etre* of its forts and garrison. Aden under British rule has retained its ancient prestige as a fortress of impregnable strength, invulnerable by sea and by land, dominating the entrance to the Red Sea, and valuable to its owners as a commercial emporium. A port of call and a cable centre. The harbour extends 8 miles from east to west and 4 from north to south and is divided into two bays by a spit of land. The depth of water in the western bay is from 3 to 4 fathoms, across the entrance 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay. Strategic control of the Red Sea was rendered complete by the annexation of Perim and Sokotra, which may both be regarded as outposts of Aden, and are under the political jurisdiction of the Resident.

The Arab chiefs of the hinterland of Arabia are nearly all stipendiaries of the British Government. Colonel Wahab and Mr. G. H. Fitzmaurice, of the Constantinople Embassy, were appointed in 1902 as Commissioners to delimitate the frontier between Turkish Arabia and the British protectorate around Aden. A convention was signed in 1905 settling details, the frontier line being drawn from Shaikh Murad, a point on the Red Sea coast opposite Perim, to the bank of the river Bana, the eastern limit of Turkish claims, at a point some 29 miles north-east of Dthala, and thence north-east to the great desert. The area left within the British Protectorate was about 9,000 square miles. The arrangement gave to Turkey Cape Bab-el Mandeb, which forms the Arabian bank of the eastern channel past Perim into the Red Sea. England took this gatepost of the Red Sea from the Turks in November 1914. A sanitorium and small British garrison used to be maintained at Dthala, which is 7,700 feet high, but the garrison was withdrawn in 1906, Lord Morley explaining this step as being in accordance with the policy stated in the House of Lords in 1903,—that His Majesty's Government had never desired to interfere with the internal and domestic affairs of the tribes on the British side of the boundary, but had throughout made it plain that they would not assent to the interference of any other Power with those affairs. Affairs in this respect have been disarranged considerably by the war.

British Policy.

There has been much criticism of a policy under which Aden has failed to advance with the same progressive strides which have marked the development of other British dependencies. It is said that the former Persian possessors of Aden built its wonderful water tanks, and the Arabs made an aqueduct 20 miles long, while the British have done nothing except mount guns to protect their coal yards. Trade, it is argued, flourishes because this is a natural emporium of commerce, but not because of the attention its needs get from Government. Lord Roberts, writing on this point a few years ago, said : "It is not creditable to British rule to

make use of a dependency like Aden for selfish purposes of political necessity without attempting to extend the benefits of civilised Government to the neighbouring native tribes, especially when those tribes are living under the aegis of the British Crown. The Persians, the Turks and even the Arabs did more for Aden in their time than we have done during our seventy years' occupation.....Aden has always suffered under the disadvantage of being an appanage of the Bombay Presidency, with which it has neither geographical, racial nor political affinity. Probably the best solution of the matter would be to hand over the place to the Colonial Office, relieving the Government of Bombay of a charge which is only looked upon as an incubus." Some important steps have been taken in the past few years to satisfy the commercial needs of the port.

Trade.

The trade of Aden has developed immensely since British acquisition in 1839, largely through the Government of India declaring it a free port in 1850, since when it has attracted much of the valuable trade between Arabia and Africa, formerly monopolised by the Red Sea ports of Hodeida and Mokha. The opening of the Suez Canal was also responsible for a large increase of trade through Aden into the interior.

The total imports by sea in the last pre-war year amounted to £3,756,964, exclusive of treasure, and exports to £3,267,283, imports overland were £270,213 and exports £140,159, exclusive of treasure. The war practically overturned the overseas trade and some time must elapse before it can return to normal conditions. There has been a great increase of trade since the signing of the Armistice, but prices have so greatly risen that comparisons are difficult. Foreign trade in the official year 1918-19 amounted to £6,888,484 and Indian trade to £3,034,642, these amounts representing increases of £1,652,435 and £575,700 respectively. Land trade amounted to £121,533, a decrease of £8,547. Since the cessation of the hostilities on the Shaikh Othman front, the inland trade has increased by one thousand camel loads monthly.

Language.

The language of the settlement is Arabic, but several other Asiatic tongues are spoken. The population is chiefly returned as Arabs and Shaikhs. The Somalis from the African coast and Arabs do the hard labour of the port. So far as the settlement is concerned there are no products whatever, with the important exception of salt. The crops of the tribal low country adjoining are jowar, sesamum, a little cotton, madder, a bastard saffron and a little indigo. In the hills, wheat, madder, fruit, coffee and a considerable quantity of wax and honey are obtained. The water supply forms the most important problem. Water is drawn from four sources—wells, aqueducts, tanks or reservoirs and condensers.

Administration.

The Aden settlement was until 1918 subject politically to the Government of Bombay, but it was then handed over to the Foreign Office. The question of its future control is still under discussion, the alternative proposals having to hand it over to the Colonial Office of the Imperial Government and to permit it to continue as in past years a portion of the Indian Empire. Indian opinion in India opposes the transfer, holding that under the Colonial Office the status of Indians in the place would suffer. The administration is conducted by a Resident, who is assisted by four Assistants. The Resident is also ordinarily military Commandant and has hitherto usually been an officer selected from the Indian army, as have his assistants. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with slave trading, his court being called the Colonial Court of the Admiralty. The laws in force in the settlement are generally speaking those in force in the Bombay Presidency, supplemented on certain points by special regulations to suit local conditions. The management of the port is under the control of a Board of Trustees formed in 1888. The principal business of the Port Trust has been the deepening of the harbour, so as to allow vessels of all sizes to enter and leave at all states of the tide. The Aden police force numbers slightly over 200 men. There are hospitals and dispensaries in both Aden and Perim, in addition to the military institutions of this character. The garrison comprises a troop of engineers, three companies of garrison artillery, one battalion of British infantry, two companies of sappers and miners and one Indian regiment. Detachments from the last named are maintained at Perim and Shaikh Othman respectively.

The average temperature of the station is 87 degrees in the shade, the mean range being from 75 in January to 98 in June, with variations up to 102. The lulls between the monsoons, in May and September, are very oppressive. Consequently, long residence impairs the faculties and undermines the constitution of Europeans and even Indians suffer from the effects of too long an abode in the settlement, and troops are not posted in the station for long periods, being usually sent there one year and relieved the next. But Aden is exceptionally free from infectious diseases and epidemics, and the absence of vegetation, the dryness of the soil and the purity of the drinking water constitute efficient safeguards against many maladies common to tropical countries. The annual rainfall varies from ¼ inch to 8¼ inches, with an irregular average of 3 inches.

The following are the principal officers of the present administration :—

Political Resident, Major-General T. E. Scott, C.B., C.I.E., D.S.O.

Assistant Residents, Captain J. G. Worth (Perim) and Major B. R Reilly, O.B.E.

The area enclosed within the boundaries of India is 1,773,168 square miles, with a population of 315,132,537 of people—nearly one-fifth of the human race. But of this total a very large part is not under British Administration. The area covered in the Native States is 675,267 square miles with a population of seventy millions. The Native States embrace the widest variety of country and jurisdiction. They vary in size from petty states like Lawa, in Rajputana, with an area of 19 square miles, and the Simla Hill States, which are little more than small holdings, to States like Hyderabad, as large as Italy, with a population of thirteen millions. They include the inhospitable regions of Western Rajputana, Baroda, part of the Garden of India, Mysore, rich in agricultural wealth, and Kashmir, one of the most favoured spots on the face of the globe. In the case of 175 States control is exercised by the Government of India, and of about 500 by the Provincial Governments. The four principal states, Hyderabad, Mysore, Baroda and Kashmir, are in direct relation with the Government of India. The other States are grouped under the direction of an Agent to the Governor-General, as for Rajputana and Central India; in one case the Provincial Government has been compelled to group its States, those of Kathiawar, under an Agent to the Governor.

Relations with the Paramount Power.

So diverse are the conditions under which the Native States were established and came into political relation with the Government of India, that it is impossible even to summarise them. But broadly it may be said that as the British boundaries expanded, the states came under the influence of the Government and the rulers were confirmed in their possessions. To this general policy however there was, for a brief period, an important departure. During the regime of Lord Dalhousie the Government introduced what was called annexation through lapse. That is to say, when there was no direct heir, the Covernment considered whether public interests would be secured by granting the right of adoption. Through the application of this policy, the states of Satara and of Nagpur fell in to the East India Company, and the kingdom of Oudh was annexed because of the gross misgovernment of its rulers. Then came the Mutiny. It was followed by the transference of the dominions of the East India Company to the Crown, and an irrevocable declaration of policy toward the Native States. In the historic Proclamation of Queen Victoria it was set out that "We desire no extension of our present territorial possessions; and while we will permit no aggression on our dominions or our rights to be attempted with impunity, we shall allow no encroachments on those of others. We shall respect the rights, dignity and honour of the Native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government." Since the issue of that proclamation there has been no encroachment on the area under Native rule by the Government of India. On the contrary, the movement has been in the opposite direction. In 1881 the State of Mysore, which had been so long under British administration that the traditions of Native rule were almost forgotten, was restored to the old Hindu ruling house. In 1911 the Maharajah of Benares, the great taluqdar of Oudh, was granted ruling powers over his extensive possessions. On many occasions the Government of India has had to intervene, to prevent gross misgovernment, or to carry on the administration during a long minority; but always with the undeviating intention of restoring the territories as soon as the necessity for intervention passed. Almost all states possess the right of adoption in default of heirs.

Rights of Native States.

The rights and obligations of the Native States are thus described by the Imperial Gazetteer. The Chiefs have, without exception, gained protection against dangers from without and a guarantee that the protector will respect their rights as rulers. The Paramount Power acts for them in relation to foreign Powers and other Native States. The inhabitants of the Native States are the subjects of their rulers, and except in case of personal jurisdiction over British subjects, these rulers and their subjects are free from the control of the laws of British India. Criminals escaping to a Native State must be handed over to it by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The Native Princes have therefore a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. The suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in rare cases, applied to maritime states, they have freedom of trade with British India although they levy their own customs, and their subjects are admitted to most of the public offices of the British Government.

Obligations of Native States.

On the other hand, the Native States are under an obligation not to enter into relations with foreign nations or other states; the authority of their rulers has no existence outside their territories. Their subjects outside their dominions become for all intents and purposes British subjects. Where foreign interests are concerned, the Paramount Power must act so that no just cause of offence is given by its subordinate allies. All Native States alike are under an obligation to refer to the British every question of dispute with other states. Inasmuch as the Native States have no use for a military establishment other than for police, or display, or for co-operation with the Imperial Government, their military forces, their equipment and armament are prescribed by the Paramount Power. Although old and unaltered treaties declare that the British Government will have no manner of concern with any of a Maharajah's dependents or servants, with respect to whom the Maharajah is absolute, logic and public opinion

have endorsed the principle which Lord Canning set forth in his minute of 1860, that the "Government of India is not precluded from stepping in to set right such serious abuses in a Native Government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a Native State when there shall be sufficient reason to do so." Of this necessity the Governor-General in Council is the sole judge, subject to the control of Parliament. Where the law of British India confers jurisdiction over British subjects or other specified persons in foreign territory, that power is exercised by the British courts which possess it. The subjects of European Powers and the United States are on the same footing. Where cantonments exist in Native territory, jurisdiction both over the cantonment and the civil station is exercised by the suzerain power.

Political Officers.

The powers of the British Government are exercised through Political Officers who, as a rule, reside in the states themselves. In the larger states the Government is represented by a Resident, in groups of states by an Agent to the Governor-General, assisted by local Residents or Political Agents. These officers form the sole channel of communication between the Native States and the Government of India and its Foreign Department, with the officials of British India and with other Native States. They are expected to advise and assist the Ruling Chiefs in any administrative or other matters on which they may be consulted. Political Agents are similarly employed in the larger States under the Provincial Governments, but in the petty states scattered over British India the duties of the Agent are usually entrusted to the Collector or Commissioner in whose district they lie. All questions relating to the Native States are under the special supervision of the Supreme Government, and in the personal charge of the Governor-General. A proposal has been made by the Government of India that, in view of the increasing importance of the Native States, an additional Secretary, styled the Political Secretary, shall be appointed, who shall be in special charge, under the Viceroy, of these questions.

Closer Partnership.

Events have tended gradually to draw the Paramount Power and the Native States into closer harmony. Special care has been devoted to the education of the sons of Ruling Chiefs, first by the employment of tutors, and afterwards by the establishment of special colleges for the purpose. These are now established at Ajmere, Rajkot, Indore and Lahore. The Imperial Cadet Corps, whose headquarters are at Dehra Dun, imparts military raining to the scions of the ruling chiefs and noble families. The spread of higher education has placed at the disposal of the Native States the products of the Universities. In these ways there has been a steady rise in the character of the administration of the Native States, approximating more closely to the British ideal. Most of the Native States have also come forward to bear their share in the burden of Imperial defence. Following on the spontaneous offer of military assistance when war with Russia appeared to be inevitable over the Penjdeh incident in 1885, the states have raised a portion of their forces up to the standard of the Native troops in the Indian Army. These are termed Imperial Service Troops; they belong to the states, they are officered by Indians; but they are inspected by a regular cadre of British officers under the general direction of the Inspecton General of Imperial Service Troops. Their numbers are approximately 22,000 men; their armament is the same as that of the Indian Army and they have done good service often under their own Chiefs, on the Frontier and in China and in Somaliland. Secure in the knowledge that the Paramount Power will respect their rights and privileges, the Ruling Chiefs have lost the suspicion which was common when their position was less assured, and the visits of the Prince of Wales in 1875, of the Prince and Princess of Wales in 1905-06, and of the King and Queen in 1911-12 have tended to seal the devotion of the great feudatories to the Crown. The improvement in the standard of native rule has also permitted the Government of India largely to reduce the degree of interference in the internal affairs of the Native States. The new policy was authoritatively laid down by Lord Minto, the then Viceroy, in a speech at Udaipur in 1909, when he said:—

"Our policy is with rare exceptions, one of non-interference in the internal affairs of the Native States. But in guaranteeing their internal independence and in undertaking their protection against external aggression it naturally follows that the Imperial Government has assumed a certain degree of responsibility for the general soundness of their administration and could not consent to incur the reproach of being an indirect instrument of misrule. There are also certain matters in which it is necessary for the Government of India to safeguard the interests of the community as a whole as well as those of the paramount power, such as railways, telegraphs and other services of an Imperial character. But the relationship of the Supreme Government to the State is one of suzerainty. The foundation-stone of the whole system is the recognition of identity of interests between the Imperial Government and Durbars and the minimum of interference with the latter in their own affairs."

HYDERABAD.

Hyderabad, the premier Native State in India, is in the Deccan. Its area is 82,698 square miles and population 13,374,676. The general physical characteristics of the State are an elevated plateau, divided geographically and ethnologically by the Manjra and Godaveri rivers. To the North-West is the Trappean region, peopled by Marathas, a country of black cotton soil producing wheat and cotton. To the South-East is the granatic region of the Telugus and producing rice.

HISTORY.—In pre-historic times Hyderabad came within the great Dravidian zone. The date of the Aryan conquest is obscure, but the

dominions of Asoka 272 to 231 B.C. embraced the northern and western portions of the State. Three great Hindu dynasties followed, those of the Pallavas, Chalukyas and Yadavas. In 1294 the irruption of the Mahomedans under Ala-ud-din Khilji, commenced, and thenceforward till the time of Aurungzebe the history of the State is a confused story of struggles against the surviving Hindu kingdom of the South, and after the fall of Vijayanagar, with each other. Aurungzebe stamped out the remains of Mahomedan independence of the South, and set up his General, Asaf Jah, of Turcoman descent, as Viceroy, or Subhadar of the Deccan in 1713. In the chaos which followed the death of Aurungzebe, Asaf Jah had no difficulty in establishing and maintaining his independence, and thus founded the present House. During the struggle between the British and the French for mastery in India, the Nizam finally threw in his lot with the British, and unshaken even by the excitement of the mutiny, has been so staunch to his engagements as to earn the title of "Our Faithful Ally." The present ruler is His Exalted Highness Sir Usman Ali Khan Bahadur Fatch Jung, G.C.S.I.

THE BERARS.—A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 re-affirmed His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was eased in perpetuity to an annual rental of 25 lakhs (nearly £167,000); the rental is for the present charged with an annual debit towards the repayment of loans made by the Government of India. The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, re-organise and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was re-organised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces.

ADMINISTRATION.—The Nizam is supreme in the State and exercises the power of life and death over his subjects. The form of government was changed in 1919, an Executive Council being established which consists of seven ordinary and one extraordinary members under a president Sir Syed Ali Imam, K.C.S.I. Below the Secretariat the State is divided into Subhas or Divisions, Districts and Talukas. Fifteen District, 88 Taluk and nine Divisional Boards are at work in the District. A Legislative Council, consisting of 23 members, of whom 12 are official and 11 non-official, is responsible for making laws. The State maintains its own currency, the Osmania Sicca rupee with a subordinate coinage. In 1904 an improved Mahbubia rupee was struck and this exchanges with the British rupee at the ratio of 115 or 116 to 100. It has its own postal system and stamps for internal purposes. It maintains its own Army, comprising 16,269 troops, of which 3,753 are classed as Regular and 11,242 as Irregular. There are in addition 1,274 Imperial Service Troops.

FINANCE.—After many vicissitudes, the financial position of the State is strong. For the year 1918-19 receipts amounted to Rs. 583 lakhs and expenditure to Rs. 601 lakhs.

PRODUCTION AND INDUSTRY.—The principal industry of the State is agriculture, which maintains 57·1 per cent. of the population. The common system of land tenure is ryotwari. As no reliable figures are available to show the gross produce it is impossible to say what proportion the land revenue bears to it, but it is collected without difficulty. The principal food crops are millet and rice; the staple money crops cotton, which is grown extensively on the black cotton soils, and oil-seeds. The State is rich in minerals. The great Warangal coal measures are worked at Singareni, but the efforts to revive the historic gold and diamond mines have met with very qualified success. The manufacturing industries are consequent on the growth of cotton, and comprise three spinning and weaving mills and ginning and pressing factories in the cotton tracts.

COMMUNICATIONS.—One hundred and thirty-seven miles of the broad gauge line from Bombay to Madras traverse the State. At Wadi, on this section, the broad gauge system of the Nizam's Guaranteed State Railway takes off, running East to Warangal and South-East toward Bezwada, a total length of 330 miles. From Hyderabad the metre gauge Godaveri Railway runs North-West to Manmad on the Great Indian Peninsula Company's system 391 miles. There are thus 471 miles of broad gauge and 391 of metre in the State. The Barsi Light Railway owns a short extension to Latur. The roads are generally inferior.

EDUCATION.—The State maintains two Colleges. The Nizam College at Hyderabad (first grade) is affiliated to the Madras University. The Oriental College at Hyderabad prepares students for the local Moulvi and Munshi examinations. In 1918-19 the total number of educational institutions rose from 3,224 to 3,556, the number of primary schools in particular having been largely increased.

British Resident—Mr. C. L. S. Russell, I.C.S.

MYSORE.

The State of Mysore is surrounded on all sides by the Madras Presidency except on the north and north-west where it is bounded by the districts of Dharwar and North Canara respectively and towards the south-west by Coorg. It is naturally divided into two regions of distinct character; the hill country (the Malnad) on the west and the wide-spreading valleys and plains (the Maidan) on the east. The State has an area of 29,461 square miles excluding that of the Civil and Military Station of Bangalore and a population of 5,705,359, of whom over 92 per cent. are Hindus. Kanarese is the distinctive language of the State.

HISTORY.—The ancient history of the country is varied and interesting. Tradition connects the table-land of Mysore with many a legend enshrined in the great Indian epics, the Ramayana and the Mahabharata. Coming down to historical times, the north-eastern portion of the country formed part of Asoka's Empire in the third century B. C. Mysore then came under the rule of the Andhra dynasty. From about the third to the eleventh century A. D. Mysore was ruled by three dynasties, the north-western portion by the Kadambas, the eastern and northern portions by the Pallavas and the central and southern portions by the Gangas. In the eleventh century, Mysore formed part of the Chola dominion, but the Cholas were driven out early in the twelfth century by the Hoysalas, an indigenous dynasty with its capital at Halebid. The Hoysala power came to an end in the early part of the fourteenth century. Mysore was next connected with the Vijayanagar Empire. At the end of the fourteenth century, Mysore became associated with the present ruling dynasty. At first tributary to the dominant empire of Vijayanagar, the dynasty attained its independence after the downfall of Vijayanagar in 1565. In the latter part of the eighteenth century the real sovereignty passed into the hands of Haidar Ali and then his son Tippu Sultan. In 1799, on the fall of Seringapatam, the British Government restored the State comprised within its present limits, to the ancient dynasty in the person of Maharaja Sri Krishnaraja Wadiyar Bahadur III. Owing to the insurrections that broke out in some parts of the country, the management was assumed by the British Government in 1831. In 1881, the State was restored to the dynasty in the person of Sri Chamarajendra Wadiyar Bahadur under conditions and stipulations laid down in the Instruments of Transfer. That ruler with the assistance of Mr. (afterwards Sir) K. Seshadri Iyer, K.C.S.I., as Dewan, brought Mysore to a state of great prosperity. He died in 1894 and was succeeded by the present Maharaja Sir Sri Krishnaraja Wadiyar Bahadur, G.C.S.I., who was installed in 1902. In November 1913, the Instrument of Transfer was replaced by a Treaty which indicates more appropriately the relation subsisting between the British Government and the State of Mysore.

ADMINISTRATION.—The city of Mysore is the capital of the State, but Bangalore City is the administrative headquarters. His Highness the Maharaja is the ultimate authority in the State and the administration is conducted under his control, by the Dewan and four Members of the Council including the Extraordinary Member. The Chief Court consisting of three Judges is the highest judicial tribunal in the State. A Representative Assembly meets twice a year at Mysore—once in October during the Dasara and a second time on the occasion of the birthday of His Highness. In the October Session the Dewan presents to the Assembly an account of the Finances of the State of the preceding official year and deals also with the more important administrative measures. Representations about wants and grievances are heard and discussed. In the Birthday Session the Budget for the ensuing year is placed before the Assembly and its opinion invited. Such of the representations of the October Session as were not heard for want of time are taken up and discussed along with the fresh subjects brought up. There is also a Legislative Council consisting of 30 members, of whom 12 are officials, and 18 non-officials, thirteen elected and five nominated. The Council has been given the privileges of interpellation, discussion of the State budget and the moving of resolutions on matters other than the budget. All the important branches of the administration are controlled by separate heads of departments. For administrative purposes, the State is divided into 8 districts and subdivided into 68 talukas, each district being under a Deputy Commissioner and District Magistrate and each taluk under an Amildar and Subordinate Magistrate. The State maintains a military force of 3,881 including 923 in the Imperial Service Lancers and 748 in the Imperial Service Transport Corps.

The cash balance at the beginning of 1919-20 was 106 lakhs. Total receipts during the year 1918-19 were Rs. 313 lakhs and total disbursement 425. The principal revenue heads are:—Land Revenue Rs. 117 lakhs; Mining Royalty Rs. 12 lakhs; Forest revenue Rs. 42 lakhs; Excise Rs. 72 lakhs; Stamps Rs. 16 lakhs; Railways Rs. 18 lakhs and Electric Power Rs. 10 lakhs. Mysore pays an annual subsidy of Rs. 35 lakhs to the British Government besides contributing indirectly to the British Revenues under Customs and Salt.

ECONOMIC CONFERENCE.—The Mysore Economic Conference was organised in June 1911 with the object of creating and keeping alive public interest in matters connected with the economic progress of the State by a frequent interchange of views and discussions among those competent to deal with them and in order to associate men of enlightenment, public spirited citizens, prominent agriculturists, merchants and others with the officers of Government in such deliberations. The Conference meets annually at Mysore during the festivities in connection with His Highness the Maharaja's birthday. The Dewan is the President of the Conference. It has four Boards dealing with questions connected with Agriculture Education, Industries and Commerce and Chemical research and scientific advance and Committees for developing economic activities in local areas, such as districts, talukas and towns. Under the auspices of the Conference a monthly Journal

is issued in English and a weekly paper in Kannada, and bulletins on important subjects are periodically issued.

The economic work in the districts has been handed over to District Boards. The work in the Taluks has been delegated to taluk Boards and in the villages to Village Panchayats.

AGRICULTURE.—Nearly three-fourths of the population are employed in agriculture and the general system of land tenure is Ryotwari. The principal food crops are ragi, rice, jola, millets, gram and sugarcane and the chief fibres are cotton and san-hemp. Over 28,000 acres are under mulberry, the silk industry being the most profitable in Mysore next to gold mining. A Superintendent of Seri-culture has been appointed, arrangements are being made for the supply of disease—free seed and a central and 9 Taluka Popular Schools have been started. The Department of Agriculture is popularising agriculture on scientific lines by means of demonstrations, investigations and experiments. There is one Central Farm at Hebbal to deal with all classes of crops and two others, one at Hiriyur in connection with cotton and crops suited to localities where the rainfall is light and the other at Marathur in the region of heavy rainfall. A Sugarcane Farm has been opened under the new Krishnarajasagara works and Committees have been constituted in several districts for the development of the sugarcane cultivation. A Live-stock Expert has been appointed.

INDUSTRIES AND COMMERCE.—A Department of Industries and Commerce was organised in 1913 with a view to the development of Industries and Commerce in the State. Its main functions are stimulating private enterprise by the offer of technical advice and other assistance for starting new industries, undertaking experimental work for pioneering industries and developing existing industries and serving as a general bureau of information in industrial and commercial matters. A system of granting loans for the purchase of machinery and appliances has been introduced in the State. The manufacturing industries include two cotton mills, one woollen mill, nine cotton ginning mills, four cotton presses, and 92 silk filatures. There are also one oil mill, fifteen rice mills, nine sugar mills, sixteen brick and tile factories, one cigar factory, two tanneries, fifteen mechanical workshops, two distilleries, one silk reeling house, two flour mills, seven bone-crushing mills and coffee works, two dyeing factories, one hosiery, one brewery, one iron and brass foundry, one lacquer work factory, two taxidermic works, one saw-mill, one weaving factory, one Pharmaceutical work, one wood turning and one art Lithographic press. In addition there are fifty-four pumping plants for irrigation. The Sandalwood Oil Factory started on an experimental basis is now working on a commercial scale. A large factory is working at Mysore. Arrangements have commenced for establishing wood distillation and iron works in the State under an agreement with Messrs. Tata & Sons. Local Syndicates have been formed at Davangere and Mysore for establishing Cotton Mills at those places. A button factory, a soap factory and a metal working factory are the other concerns now run by the Government on a commercial scale. Concessions have been granted to a private gentleman in Mysore for the manufacture of matches as a home industry. An Arts and Crafts Depot has been opened to give special encouragement for inlay workers, sandalwood carvers and to those engaged in preparing high class silk, lace cloths and metalworks. The establishment of a Central District and Commercial Museums at District Headquarters has been sanctioned. A Chamber of Commerce has been established at Bangalore with branches at important trade centres with a separate division for dealing solely with questions relating to commercial developments in the State.

BANKING.—In 1913, a State-aided bank called the Bank of Mysore was started with its headquarters in Bangalore and agencies at many of the important places in the State. Besides this there are two Provincial Banks, 3 District Banks, 13 Federal Banking Unions and 1,402 Co-operative Societies working with a total working Capital of Rs. 78 Lakhs.

COMMUNICATIONS.—The Railway system radiates from Bangalore, various branches of the Madras and Southern Mahratta Railway running through the State. The length of the lines owned by the State and worked under contract by the Company is 271·48 miles, of which 9·88 are of broad gauge and the rest metre gauge. The Mysore-Arsikere Railway (102·95 miles) in length has been opened for traffic. The Kolar District Board Railway (63 miles) and the Bangalore-Chickballapur Light Railway (35 miles) both of 2'-6" gauge together with a tramway from Tarikere to Narasimharajapura (27 miles) 2 feet gauge have been opened and are being worked by State Agency.

Two lines, Chickjapur to Chitaldrug, 21 miles, metre-gauge, and Tadasa-Hebbe, 10 miles, 2 feet gauge, are nearing completion. The work on the Kemmangundi-Benkipur Tramway, Agasanahadlu-Benkipur Tramway commenced in October 1918 is in progress. The construction of the Shimoga-Arasalu Railway commenced in 1919 is also progressing. Several other projects were under survey and investigation during the year.

EDUCATION.—A separate University for Mysore was established on the 1st July 1916. It is of the teaching and residential type composed of the Central and Engineering Colleges at Bangalore, and the Maharaja's College at Mysore, with headquarters at Mysore. An important feature is that the University course is one of three years, what corresponds to the first year in other Universities being in the Collegiate High School which specially trains students for one year to fit them for the University Course. The colleges are efficiently equipped and organised and there is a training college for men located at Mysore. There is also a College for women at Mysore, *i.e.*, the Maharani's College.

With the introduction of compulsory education in select towns and the increase in the number of village schools, primary education has during recent years made considerable advance. Schools have been started for imparting instruction in agricultural, commercial, engineering

and other technical subjects. Adult education and vocational training have also been taken in hand. There were altogether in 1919-20, 9,573 public and 862 private educational institutions in the State. This gives one school to every 2·6 square miles of the area and to every 509 inhabitants.

PLACES OF INTEREST.—Mysore City, the capital, is a modern city laid out with fine roads and suburbs. The prominent buildings are the Palace, the Krishnaraja Hospital, the Chamarajendra Technical Institute, Government House, the Maharaja's College, the Maharani's College and the University Library.

Bangalore, the largest city in the State and the commercial and manufacturing centre, stands on a table land, 3,000 feet above the sea and is noted for its salubrious climate and luxuriant gardens. The principal places of interest are the Public Offices, the Central College buildings, the Muscum, the Lal Bagh, the Indian Institute of Science and the Indian Sanskrit Institute.

The historic town of Seringapatam, the famous Jog Falls, the Kolar Gold Fields, the Sivasamudram Falls, and Belur, Somnathpur and Halebid with their temples of exquisite architecture, are some of the other important places of interest in the State.

Resident in Mysore and Chief Commissioner of Coorg.—Lt.-Col. S. G. Knox.

Dewan.—Rajasevadhurina Sir M. Kantaraja Urs, K.C.I.E., C.S.I.

BARODA.

The State of Baroda is situated partly in Gujarat and partly in Kathiawar. It is divided into four distinct blocks: (1) the southern district of Navsari near the mouth of the Tapti river, and mostly surrounded by British territory; (2) central district, North of the Narbada, in which lies Baroda, the capital city; (3) to the North of Ahmedabad, the district of Kadi; and (4) to the West, in the Peninsula of Kathiawar, the district of Amreli, formed of scattered tracts of land. The area of the State is 8,182 square miles; the population is 2,126,512 of whom over four-fifths are Hindus.

HISTORY.—The history of the Baroda State as such dates from the break-up of the Mughal Empire. The first Maratha invasion of Gujarat took place in 1705. In later expeditions Pilaji Gaikwar, who may be considered as the founder of the present ruling family, greatly distinguished himself. Songhad was the headquarters till 1766. After 1723 Pilaji regularly levied tribute in Gujarat. His son Damaji finally captured Baroda in 1734, since when it has always been in the hands of the Gaikwars; but Mughal authority in Gujarat did not end until the fall of Ahmedabad in 1753, after which the country was divided between the Gaikwar and the Peshwa. In spite of the fact that Damaji was one of the Maratha chiefs defeated at Panipat by Ahmed Shah, he continued to add to his territory. He died in 1768, leaving the succession in dispute between two rival sons. He was succeeded in turn by his sons Sayaji Rao I. Fattesing Rao, Manaji Rao and Govind Rao. The last died in 1800, and was succeeded by Anand Rao. A period of political instability ensued which was ended in 1802 by the help of the Bombay Government, who established the authority of Anand Rao at Baroda. By a treaty of 1805 between the British Government and Baroda, it was arranged *inter alia* that the foreign policy of the State should be conducted by the British, and that all differences with the Peshwa should be similarly arranged. Baroda was a staunch ally of the British during the wars with Baji Rao Peshwa, the Pindari hordes and Holkar. But from 1820 to 1841, when Sayaji Rao II. was Gaikwar, differences arose between the two Governments, which were settled by Sir James Carnac, Governor of Bombay in 1841. Ganpat Rao succeeded Sayaji Rao in 1847. During his rule, the political supervision of Baroda was transferred to the Supreme Government. His successor Khande Rao, who ascended the *Gadi* in 1856, introduced many reforms. He stood by the British in the Mutiny. He was succeeded by his brother Malhar Rao in 1870. Malhar Rao was deposed in 1875 for "notorious misconduct" and "gross misgovernment," but the suggestion that he had instigated the attempt to poison Col. Phayre, the Resident, was not proved. Sayaji Rao III., a boy of 13 years of age, who was descended from a distant branch of the family, was adopted as heir of Khande Rao in 1875 and is the present Gaikwar. He was invested with full powers in 1881.

ADMINISTRATION.—An executive council, consisting of the principal officers of the State, carries on the administration, subject to the control of the Maharaja, who is assisted by a Dewan and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India. The State is divided

into four *prants* each of which is subdivided into *Mahals* and *Peta Mahals* of which there are in all 42. Attempts have for some years been made to restore village autonomy, and village panchayats have been formed which form part of a scheme for local self-government. There is a Legislative Department, under a Legal Remembrancer, which is responsible for making laws. There is also a Legislative Council, consisting of nominated and elected members. A High Court at Baroda possesses jurisdiction over the whole of the State and hears all final appeals. From the decisions of the High Court, appeals lie in certain cases, to the Maharaja, who decides them on the advice of the Huzur Nyaya Sabha. The State Army consists of 5,084 Regular forces and 3,806 Irregular forces.

FINANCE.—In 1919-20, the total receipts of the State were Rs. 242 lakhs and the disbursements Rs. 181 lakhs. The principal Revenue heads were:—Land Revenue, Rs. 129 lakhs; Abkari, Rs. 35 lakhs; Opium, Rs. 11 lakhs; Railways, Rs. 11 lakhs; Interest Rs. 13 lakhs; Tribute from other States, Rs. 6 lakhs. British Currency was introduced in 1901.

PRODUCTION AND INDUSTRY.—Agriculture and pasture support 63 per cent. of the people. The principal crops are rice, wheat, gram, castor-oil, rapeseed, poppy, cotton, san-hemp, tobacco, sugarcane, maize, and garden crops. The greater part of the State is held on *ryotwari* tenure. The State contains few minerals, except sandstone, which is quarried at Songar, and a variety of other stones which are little worked. There are 63 industrial or commercial concerns in the State registered under the State Companies' Act. There are four Agricultural Banks and 491 Co-operative Societies in the Baroda State.

COMMUNICATIONS.—The B. B. & C. I. Railway crosses part of the Navsari and Baroda *prants*, and the Rajputana-Malwa Railway passes through the Kadi *prant*. A system of branch lines has been built by the Baroda Durbar in all the four *prants*, in addition to which the Tapti Valley Railway and the Baroda-Godhra Chord line (B. B. & C. I.) pass through the State. The Railways constructed by the State are about 550 miles in length and 73 miles are under construction. Good roads are not numerous.

EDUCATION.—The Education Department controls 2,873 institutions of different kinds, in 71 of which English is taught. The Baroda College is affiliated to the Bombay University. There are a number of high schools, technical schools, and schools for special classes, such as the jungle tribes and unclean castes. The State is "in a way pledged to the policy of free and compulsory primary education." It maintains a system of rural and travelling libraries. Ten per cent. of the population is returned in the census as literate. Total expense on Education is about Rs. 23 lakhs.

CAPITAL CITY.—Baroda City with the cantonment has a population of 94,712. It contains a public park, a number of fine public buildings, palaces and offices; and it is crowded with Hindu temples. The cantonment is to the north-west of the city and is garrisoned by an infantry battalion of the Indian Army. An Improvement Trust has been formed to work in Baroda City and has set itself an ambitious programme.

RULER.—His Highness Farzand-i-Khas-i-Dowlat-i-Englishia Maharaja Sir Sayaji Rao Gaekwar Sena Khas Khel, Samsher Bahadur, G.C.S.I., G.C.I.E., Maharaja of Baroda.

Resident.—Lt.-Col. D. B. Blakeway, C.I.E.

Dewan.—Mr. Manubhai N. Mehta, M.A., LL.B., C.S.I.

BALUCHISTAN AGENCY.

In this Agency are included the Native States of Kalat, Kharan and Las Bela. The Khan of Kalat is head of the Baluchistan tribal chiefs whose territories are comprised under the following divisions:—Jhalawan, Sarawan, Makran, Kachhi and Domki-Kaheri-Umrani. These districts form what may be termed Kalati Baluchistan, and occupy an area of 54,713 square miles. The inhabitants of the country are either Brahuis or Baluchis, both being Mahomedans of the Sunni sect. The country is sparsely populated, the total number being about 300,544. It derives its chief importance from its position with regard to Afghanistan on the north-western frontier of British India. The relations of Kalat with the British Government are governed by two treaties of 1854 and 1876, by the latter of which the Khan agreed to act in subordinate co-operation with the British Government. There are, however, agreements with Kalat in connection with the construction of the Indo-European telegraph, the cession of jurisdiction on the railways and in the Bolan Pass, and the permanent leases of Quetta, Nushki and Nasirabad. The Khan is assisted in the administration of the State by a Wazir-i-Azam lent by the British Government. The Governor-General's Agent in Baluchistan conducts the relations between the Government of India and the Khan, and exercises his general political supervision over the district. The revenue of the State is about Rs. 12,55,000. The present Khan is His Highness Beglar Begi Mir Sir Mahmud Khan of Kalat, G.C.I.E. He was born in 1864.

Kharan extends in a westerly and south-westerly direction from near Nushki and Kalat to the Persian border. Its area is 18,565 square miles; it has a population of 27,758 and an annual average revenue of about Rs.1,00,000.

The present Chief, Sardar Bahadur Nawab Habibullah Khan, was born about 1897 and succeeded his father Sardar Yakub Khan in 1911, when the latter was murdered by his uncle Amir Khan. The State is divided into

13 Niabats and the whole sources of income are chiefly agricultural.

Las Bela is a small State occupying the valley and delta of the Purali river, about 50 miles west of the Sind boundary. Area 7,132 square miles; population 50,697, chiefly Sunni Mahomedans, estimated average revenue about Rs. 3,72,000. The Chief of Las Bela, known as the Jam, is bound by agreement with the British Government to conduct the administration of his State in accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalat. The Jam also employs an approved Wazir, to whose advice he is subject and who generally assists him in the transaction of State business.

Agent to the Governor-General for Baluchistan:—Hon. Lt.-Col. Sir Armine Dew, K.C.I.E.

RAJPUTANA AGENCY.

Rajputana is the name of a great territorial circle with a total area of about 130,462 square miles, which includes 18 Native States, two chiefships, and the small British province of Ajmer-Merwara. It is bounded on the west by Sind, on the north-west by the Punjab State of Bahawalpur, on the north and north-east by the Punjab, on the east by the United Provinces and Gwalior, while the southern boundary runs across the central region of India in an irregular zigzag line. Of the Native States 17 are Rajput, 2 (Bharatpur and Dholpur) are Jat, and one (Tonk) is Mahomedan. The chief administrative control of the British district is vested *ex-officio* in the political officer, who holds the post of Governor-General's Agent for the supervision of the relations between the several Native States of Rajputana and the Government of India. For administrative purposes they are divided into the following groups:—Alwar Agency; Bikanir Agency, Eastern Rajputana Agency, 3 States (Bharatpur, Dholpur Karauli); Haraoti and Tonk Agency, 3 States (principal States Bundi and Tonk); Jaipur Residency, 3 States (principal State, Jaipur); Kotah and Jhalawar Agency, 2 States; Mewar Residency; Southern Rajputana States Agency, 4 States (principal State, Banswara); Western Rajputana States Agency; 3 States (principal States, Marwar and Sirohi).

The Aravalli Hills intersect the country almost from end to end. The tract to the north-west of the hills is, as a whole, sandy, ill-watered and unproductive, but improves gradually from being a mere desert in the far west to comparatively fertile lands to the north-east. To the south-east on the Aravali Hills lie higher and more fertile regions which contain extensive hill ranges and which are traversed by considerable rivers.

COMMUNICATIONS.—The total length of railways in Rajputana is 1,576 miles, of which 739 are the property of the British Government. The Rajputana-Malwa (Government) runs from Ahmedabad to Bandikui and from there branches to Agra and Delhi. Of the Native State railways the most important is the Jodhpur-Bikaner line from Marwar Junction to Hyderabad (Sind) and to Bikaner.

INHABITANTS.—Over 50 per cent. of the population are engaged in some form of agriculture; about 20 per cent. of the total population are maintained by the preparation and supply of material substances; personal and domestic service provides employment for about 5 per cent. and commerce for 2½ per cent. of the population. The principal language is Rajasthani. Among castes and tribes, the most numerous are the Brahmans, Jats, Mahajans, Chamars, Rajputs, Minas, Gujars, Bhils, Malis, and Balais. The Rajputs are, of course, the aristocracy of the country, and as such hold the land to a very large extent, either as receivers of rent or as cultivators. By reason of their position as integral families of pure descent, as a landed nobility, and as the kinsmen of ruling chiefs, they are also the aristocracy of India; and their social prestige may be measured by observing that there is hardly a tribe or clan (as distinguished from a caste) in India which does not claim descent from, or irregular connection with, one of these Rajput stocks.

The population and area of the States are as follows:—

Name of State.	Area in square miles.	Population in 1911.
Mewar Residency—		
Udaipur	12,953	1,293,776
Banswara	1,946	165,463
Dungarpur	1,447	159,192
Partabgarh	886	62,704
Western States Residency—		
Jodhpur	34,963	2,057,553
Jaisalmer	16,062	88,311
Sirohi	1,964	189,127
Jaipur Residency—		
Jaipur	15,579	2,636,674
Kishangarh	858	87,191
Lawa	19	2,564
Haraoti-Tonk Agency—		
Bundi	2,220	218,730
Tonk	1,114	303,181
Shahpura	405	47,397
Eastern States Agency—		
Bharatpur	1,982	626,665
Dholpur	1,155	270,973
Karauli	1,242	156,786
Kotah-Jhalawar Agency—		
Kotah	5,684	639,089
Jhalawar	810	96,271
Bikaner	23,311	700,983
Alwar	3,141	791,688

Udaipur State (also called Meywar) was founded in about 646 A.D. The capital city is Udaipur, which is beautifully situated on the slope of a low ridge, the summit of which is crowned by the Maharajah's palaces, and to the north and west, houses extend to the banks of a beautiful piece of water known as the Pichola Lake in the middle of which stand two island palaces. It is situated near the terminus of the Udaipur-Chitor Railway, 697 miles north of Bombay. The present ruler is His Highness Maharajadhiraj Maharana Sir Fatch Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1849 and succeeded in 1884. He is the head of the Seesodia Rajputs and is the Premier Chief. The administration is carried on by the Maharana, assisted by two ministerial officers who form the chief executive department in the State. The revenue and expenditure of the State are now about 35 and 32 lakhs a year respectively. Udaipur is rich in minerals which are little worked. Its archæological remains are numerous, and stone inscriptions dating from the third century have been found.

Banswara State, the southernmost in Rajputana, became a separate State about 1527. Towards the end of the eighteenth century Banswara became more or less subject to the Marathas, and paid tribute to the Raja of Dhar. In 1812 the Maharawal offered to become tributary to the British Government on condition of the expulsion of the Marathas, but no definite relations were formed with him till the end of 1818. The present ruler is His Highness Ray Rayan Maharawal Sri Prithi Singh Bahadur, who was born in 1888 and succeeded his father in 1913. The normal revenue is about 8 lakhs and the expenditure is nearly equal to the income. The area of the State is 1,946 square miles, and the population 219,824. His Highness is entitled to a salute of 15 guns.

Dongarpur State, with Banswara, formerly comprised the country called the Bagar. It was invaded by the Mahrattas in 1818. As in other States, inhabited by hill tribes, it became necessary at an early period of British supremacy to employ a military force to coerce the Bhils. The State represents the *Gadi* of the eldest branch of the Sisodiyas and dates its separate existence from about the close of the 12th Century, when Mahup, the rightful heir to the Chittor Throne, migrated to these parts. The present Chief is His Highness Rai Rayan Maharawal Shri Lakshman Singhji born on 7th March 1908 and succeeded on 15th November 1918. His Highness being minor, the administration is carried on by the Executive Council of the State under the supervision of the Political Agent, Southern Rajputana States. No railway line crosses the territory, the nearest railway station, Udaipur, being 65 miles distant. Revenue a little above 5 lakhs.

Partabgarh State, also called the Kanthal, was founded in the sixteenth century by a descendant of Rana Mokal of Mewar. The town of Partabgarh was founded in 1698 by Partab Singh. In the time of Jaswant Singh (1775-1844), the country was overrun by the Marathas, and the Maharawal only saved his State by agreeing to pay Holkar a tribute of *Satim Shahi* Rs. 72,700, (which then being coined in the State Mint was legal tender throughout the surrounding Native States) in lieu of Rs. 15,000 formerly paid to Delhi. The first connexion of the State with the British Government was formed in 1804; but the treaty then entered into was subsequently cancelled by Lord Cornwallis, and a fresh treaty, by which the State was taken under protection, was made in 1818. The tribute to Holkar is paid through the British Government, and in 1904 was converted to Rs.36,350 British currency The present ruler is His Highness Maharawat Sir Raghunath Singh Bahadur, K.C.I.E., who was born in 1859 and succeeded in 1890. The State is governed by the Mahrawat with the help of the Dewan, and, in judicial matters, of a Committee of eleven members styled the Raj Sabha or State Council. Revenue about 5 lakhs: expenditure nearly 3¾ lakhs. The financial administration is under the direct supervision of the State.

Jodhpur State, the largest in Rajputana; also called Marwar, consists largely of sandy country. The Maharaja of Jodhpur is the head of the Rathor Clan of Rajputs and claims descent from Rama, the deified king of Ayodhya. The earliest known king of the clan lived in the sixth century from which time onwards their history is fairly clear. After the breaking up of their Kingdom at Kanauj they founded this State about 1212 and the foundations of Jodhpur City were laid in 1459 by Rao Jodha. The State entered into a treaty of subordinate alliance with the British Govt. in 1818. Jaswant Singh succeeded in 1873 and reformed the State. His son Sardar Singh was invested with powers in 1898, the minority rule having been carried on by his uncle Maharaja Sir Pratab Singh. He died in 1911 and was succeeded by his eldest son Maharaja Sumer Singh Bahadur, who was then 14 years of age. The administration of the State was carried on by a Council of Regency appointed by the Government, presided over by Major-General Maharaja Sir Pratab Singh, who abdicated the Gadi of Idar to serve the country of his birth. On the outbreak of the European War both the Maharaja and the Regent offered their services and were allowed to proceed to the Front. The young Maharaja was, for his services at the Front, honoured with an Honorary Majority in the British Army and K.B.E. and was invested with full ruling powers in 1916 and died on 3rd October 1918. He was succeeded by his younger brother Maharaja Umed Singhji Saheb Bahadur, who is a minor, the administration of the State being carried on by a Council of Regency presided over by Lieut.-General H. H. Maharaja Sir Pratap Singhji Saheb Bahadur as before. Revenue 115 lakhs: expenditure 100 lakhs.

Jaisalmer State is one of the largest States in Rajputana and covers an area of 16,062 square miles. The Rulers of Jaisalmer belong to the Jadon clan and are the direct descendants of Krishna. Jaisalmer City was founded in 1156, and the State entered into an alliance of perpetual friendship with the British Government in 1818. In 1844, after the British conquest of Sind the forts of Shahgarh, Garsia, and Ghotaru, which had formerly belonged to Jaisalmer, were restored to the State. The present Ruling Prince is His Highness Maharajadhiraja Maha-

rawal Shri Sir Jawaharsinghji Bahadur, K.C.S.I. Revenue about four lakhs.

Sirohi State is much broken up by hills of which the main feature is Mount Abu, 5,650 feet. The Chiefs of Sirohi are Deora Rajputs, a branch of the famous Chauhan clan which furnished the last Hindu kings of Delhi. The present capital of Sirohi was built in 1425. The city suffered in the eighteenth century from the wars with Jodhpur and the depredations of wild Mina tribes. Jodhpur claimed suzerainty over Sirohi but this was disallowed and British protection was granted in 1823. The present ruler is His Highness Maharaja Dhiraj Maharao Shri Sarup Ram Singh Bahadur. The State is ruled by the Maharao with the assistance of secretaries and other officials. Revenue about 8 lakhs; expenditure 7 lakhs.

Jaipur State is the fourth largest in Rajputana. It consists, for the most part, of level and open country. The Maharaja of Jaipur is the head of the Kachwaha clan of Rajputs, which claims descent from Kusa, the son of Rama, king of Ajodhya, and the hero of the famous epic poem the Ramayana. The dynasty in Eastern Rajputana dates from about the middle of the twelfth century, when Amber was made the capital of a small State. The Chiefs of that State acquired fame as generals under the Mughals in later centuries, one of the best known being Sawai Jai Singh in the eighteenth century who was remarkable as a great mathematician for his scientific knowledge. It was he who moved the capital from Amber and built the present city of Jaipur and elevated the State above the principalities around. On his death a part of the State was annexed by the Jats of Bharatpur and internal disputes brought Jaipur to great confusion. British protection was extended to Jaipur in 1818, but the State continued to be disturbed and a Council of Regency was appointed, which governed up to 1851, when Maharaja Sawai Ramsingh assumed full powers. He nominated as his successor K. Kaim Singh of Isarla who succeeded in 1880, under the name of Sawai Madho Singh II, and is the present ruler. He was born in 1861, and, in consideration of his youth, the administration was at first conducted by a Council under the joint presidency of the Maharaja and the Political Agent. He was invested with full powers in 1882. In 1887, his salute was raised from 17 to 19 guns as a personal distinction, followed in 1896 by two additional guns. In 1888 he was created a G.C.S.I. In 1901 a G.C.I.E., and in 1903 a G.C.V.O. In 1904 he was made honorary colonel of the 13th Rajputs, and in 1911 a Major-General and Lieutenant-General in 1921. In 1908 he was presented with the Honorary degree of LL.D. of Edinburgh University and in 1912, made a Donat of the Order of the Hospital of St. John of Jerusalem. He was made a G.B.E. in 1918. Jaipur City is the largest town in Rajputana and is one of the few eastern cities laid out on a regular plan. It contains in addition to the Maharaja's palace many fine buildings. The administration of the State is carried on by the Maharaja assisted by a Council of 10 Members. The Military force consists of about 5,000 infantry, 700 cavalry and 860 artillery men. The normal revenue is about 65 lakhs; expenditure about 59 lakhs. Among important events of His Highness's rule may be mentioned the raising of the Imperial Service Transport Corps in 1889-90; the construction of numerous irrigation works, hospitals and dispensaries. When the Great European War broke out the Government of India remembering the excellent past services of the Corps in the Frontier Expeditions of Chitral (1895-96) and Tirah (1897-98) requested the Durbar to send the Corps to Mesopotamia. Accordingly on the 3rd November 1914, the Corps consisting of 524 officers and men, 826 ponies and 360 carts proceeded on active service. Their services were often mentioned in despatches of the General Officers Commanding Mesopotamia Expeditionary Forces and published in the London and India Gazettes.

As soon as the Corps returned from Mesopotamia in May, 1919, its services were readily offered by the Durbar at the outbreak of hostilities with Afghanistan and it was mobilised for services with the North-West Frontier Force. The Corps fully maintained its former tradition and returned to depot on 19th January 1920.

Including His Highness the Maharaja's endowment of Rs. 25 lakhs to Indian People's Famine Trust Fund, His Highness has contributed no less than 48 lakhs of rupees to different funds and charitable institutions not only in India but in England. Besides the above gift His Highness has contributed about 26 lakhs of rupees towards the expenses of the War, including a sum of Rs. 7,25,250 towards the maintenance of the Jaipur Transport Corps on active service.

During the Great War His Highness subscribed to the Indian War Loan in Bonds of the total value of 25 lakhs of rupees.

H. H. has adopted in 1921 Maharaja Kumar Mansingh a scion of the Rajawat family of Isarda.

In the State itself His Highness during his reign of nearly 39 years has spent 1 crore and 72 lacs of rupees on works of public utility such as roads, irrigation works, railways and famine relief. When H. I. M. Queen Empress Mary visited Jaipur in 1911 His Highness granted to his subjects a remission of back rents amounting to 50 lakhs of rupees.

Kishangarh State is in the centre of Rajputana and consists practically of two narrow strips of land separated from each other with an area of 858 square miles (population 78,000) the northern mostly sandy, the southern generally flat and fertile. The Ruling Princes of Kishangarh belong to the Rathor clan of Rajputs and are descended from Maharaja Kishan Singh (Second son of Maharaja Udai Singh of Jodhpur) who founded the town of Kishangarh in 1611. The present ruler is Lieut.-Col. His Highness Maharajadhiraj Sir Madan Singh Bahadur, K.C.S.I., K.C.I.E., Umdai Rajhai-Buland Makan, who was born in 1884 and was invested with powers in 1905. He administers the State with the help of a Council. His Highness served in France in 1914-15 and was mentioned in despatches by Field-Marshal Lord French. Revenue 8 lakhs. Expenditure 5 lakhs.

Lawa State, or takurat of Rajputana is a separate chiefship under the protection of the British Government and independent of any Native States. It formerly belonged to Jaipur

and then became part of the State of Tonk. In 1867, the Nawab of Tonk murdered the Thakur's uncle and his followers, and Lawa was then raised to its present State. The Thakurs of Lawa belonged to the Naruka sept of the Kachwaha Rajputs. The present Thakur, Mangal Singh, was born in 1873, and succeeded to the estate in May, 1892. Revenue about Rs. 11,000.

Bundi State is a mountainous territory in the south-east of Rajputana. The Chief of Bundi is the head of the Hara sept of the great clan of Chauhan Rajputs and the country occupied by this sept has for the last five or six centuries been known as Haraoti. The State was founded in the early part of the thirteenth century and constant feuds with Mewar and Malwa followed. It threw in its lot with the Mahomedan emperors in the sixteenth century. In later times it was constantly ravaged by the Marathas and Pindaries and came under British protection in 1818 at which time it was paying tribute to Holkar. The present ruler of this State—which is administered by the Maharao Raja and a Council of 8 in an old-fashioned but popular manner—is His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., G.C.S.I. He was born in 1869 and succeeded in 1889. Revenue about 10 lakhs: Expenditure 9·6 lakhs.

Tonk State—Partly in Rajputana and partly in Central India, consists of six Parganas separated from one another. The ruling family belongs to the Salarzai Clan of the Bunerwal Afghan tribe. The founder of the State was Amiruddaula Nawab Mahomed Amir Khan Bahadur, General of the Army collected at the end of the eighteenth century. The foundation of the State was laid down in the year 1817. His grandson was deposed. The present ruler of the State is His Highness Amiruddaula Wazirul-Mulk Nawab Sir Hafiz Muhammad Ibrahim Ali Khan Bahadur, G.C.S.I., G.C.I.E., The administration is conducted by the Nawab assisted by a Council of four members. Revenue 20,47,965, Expenditure: 19,44,693.

Shahpura Chiefship is a small pastoral State. The ruling family belongs to the Seesodia clan of Rajputs. The Chiefship came into existence about 1629, being a grant from the Emperor Shah Jahan to one Sujan Singh. The present Chief is Sir Nahar Singh, K.C.I.E., who succeeded by adoption in 1870 and received full powers in 1876. In addition to holding Shahpura by grant from the British Government the Raja Dhiraj possesses the estate of Kachhola in Udaipur for which he pays tribute and does formal service as a great noble of that State. Revenue 3 lakhs: Expenditure 2·6 lakhs.

Bharatpur State.—Consists largely of an immense alluvial plain, watered by the Banganga and other rivers.

The present ruling family of Bharatpur are Jats, of the Sinsinwar clan who trace their pedigree to the eleventh century. The family is of the Sinsinwal clan named so after their old village Sinsini. Bharatpur was the first State in Rajputana that made alliance with the British Government in 1803, helped Lord Lake with 5,000 horse in his conquest of Agra and battle of Laswari wherein the Maratha power was entirely broken and received 5 districts as reward for the service. In 1804, however, Bharatpur sided with Jaswant Rao Holkar against the British Government which resulted in a fight with the Government. Peace was re-established in 1805 under a treaty of alliance and it continues in force. The State, being usurped by Durjan Sal in 1825, the British Government took the cause of the rightful heir, Maharaja Balwant Singh Sahib. Bharatpur was besieged by Lord Combermere, and as the faithful subjects almost all joined the British Army, the result could not be otherwise than capture of the Capital and restoration of the State to its rightful owner. Bharatpur rendered valuable service to the British Government during the Mutiny. The present Chief is His Highness Major Shri Maharaja Vrijendra Sawai Kishen Singh Bahadur Jung, who was born in 1899 and succeeded in the following year his father Maharaja Ram Singh, who was deposed. Revenue 32 lakhs. Expenditure 31 lakhs.

Dholpur State, the easternmost State in Rajputana, has changed hands on unusual number of times. It was occupied by the British in 1803 and restored to the Gwalior Chief who formerly owned it, but by a fresh arrangement of 1805 it was constituted a State with other districts and made over to Maharaj Rana Kirat Singh, in exchange for his territory of Gohad which was given up to Sindhia. The ruling family are Jats of the Bamraolia clan, the latter name being derived from a place near Agra where the family held land in the twelfth century. The present chief—who is assisted in the administration by three Ministers—is Col. H. H. Maharaj Rana Sir Udaibhan Singh Lokinder Bahadur. He was born in 1893 and succeeded in 1911. He was created a K.C.S.I. in January 1918; attached to the Staff of the General Commanding Peshawar Afghan expedition 1919. Revenue 15 Lakhs; Expenditure 12 lakhs.

Karauli State is a hilly tract in Eastern Rajputana, of which the ruler is the head of the Jadon clan of Rajputs who claim direct descent from Krishna and were at one time very powerful. On the decline of the Mughal power the State was subjugated by the Marathas, but by the treaty of 1817 it was taken under British protection. Its subsequent history is of interest chiefly for a famous adoption case, in 1852. The present ruler is H. H. Maharaja Sir Banwar Pal Deo Bahadur Yadu-Kul-Chandra Bhal, G.C.I.E., who was born in 1864, installed in 1889, and invested with powers in 1889. He is assisted by a council of two members (Dewan Rai Bahadur Pundit Girija Kishor Dutt). The nearest Railway station is Hindaun City on N. M. S. Railway. Revenue 6 lakhs; Expenditure 5 lakhs.

Kotah State belongs to the Hara sect of the clan of Chauhan Rajputs, and the early history of their house is, up to the 17th century, identical with that of the Bundi family from which they are an offshoot. Its existence as a separate State dates from 1625. It came under British protection in 1817. The present ruler is H. H. Lieut.-Colonel Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., G.B.E., who was born in 1873 and invested with full powers in 1893. In administration he is assisted by a Diwan (Dewan Bahadur Chaube Raghunath Das, C.S.I.) The most important event of his

rule has been the restoration, on the deposition of the late chief of the Jhalawar State, of 15 out of the 17 districts which had been ceded in 1838 to form that principality. Revenue 41 lakhs; Expenditure 34 lakhs.

Jhalawar State (for history see under Kotah) consists of two separate tracts in the south-east of Rajputana. The ruling family belongs to the Jhala clan of Rajputs. The last ruler was deposed for misgovernment in 1896, part of the State was reassigned to Kotah, and Kunwar Bhawani Singh, son of Thakur Chhatarsalji of Fatehpur, was selected by Government to be the Ruler of the new State. He was born in 1874 and was created a K.C.S.I. in 1908. He is assisted in administration by a Council, has established many useful institutions, and has done much to extend education in the State. Revenue 6 lakhs.

Bikaner State, the second largest in Rajputana, consists largely of sandy and ill-watered land. It was founded by Bika, a Rathor Rajput, the sixth son of a Chief of Marwar, in the 15th century. Rai Singh, the first Raja, was one of Akbar's most distinguished generals, and built the main fort of Bikaner. Throughout the 18th century there was constant fighting between Bikaner and Jodhpur. In 1818 the Maharaja invited the assistance of British Troops to quell a rebellion, and subsequently a special force had to be raised to deal with the dacoits on the southern borders of the State. The Thakurs of the State continued to give trouble up to the eighties. The present Ruler is Major-General H. H. Maharaiah Sri Sir Ganga Singhji Bahadur, G.C.S.I., G.C.I.E., A.D.C. to the King, who was born in 1880 and invested with full powers in 1898. He raised an Imperial Service Camel Corps which served in China and Somaliland, and His Highness served in the former campaign himself, being mentioned in despatches. In 1900 he was awarded the first class Kaisar-i-Hind medal for the active part he took in relieving the great famine of 1899-1900. He is an honorary LL.D. of Cambridge. In administration His Highness is assisted by five secretaries, to each of whom are allotted certain departments; and there is a council of five members which is primarily a judicial body, but is consulted in matters of importance. The revenue of the State is now about sixty lakhs; there are no debts. A coal mine is worked at Palana, 14 miles south of the capital.

Alwar State is a hilly tract of land in the East of Rajputana. Its Rulers belong to the Lalawat Naruka branch of Kshatrias, Solar Dynasty. This ruling family is descended from Raja Udai Karanji, who was the common ancestor of both Alwar and Jaipur. The State was founded by Pratab Singh, who before his death in 1791 had secured possession of large territories. His successor sent a force to co-operate with Lord Lake in the war of 1803 and an alliance was concluded with him in that year. Disputes about successions mark the history of the State during the earlier part of the nineteenth century. The present chief, H. H. Lt.-Col. Sewai Maharaja Sir Jey Singhji Bahadur, G.C.I.E., K.C.S.I., who was born in 1882, succeeded his father in 1892 and was invested with powers in 1903. He carries on the administration with the assistance of four Ministers, Members of His Highness's Council and various heads of departments. The normal revenue and expenditure are about Rs. 40 lakhs a year. The State besides maintaining other forces, maintains also the Imperial Service Troops which His Highness the late Maharaja was the first prince in Rajputana to offer (in 1888) in the defence of the Empire. The capital is Alwar on the Rajputana-Malwa Railway, 98 miles west of Delhi.

RAJPUTANA.

Agent to Governor-General—The Hon. Mr. R. E. Holland, C.I.E.

UDAIPUR.

Resident—W. H. J. Wilkinson, C.I.E.

JAIPUR.

Resident—Lieut.-Col. R. A. E. Benn.

EASTERN RAJPUTANA STATES.

Political Agent—A. R. Jelf.

WESTERN RAJPUTANA STATES.

Resident—Lt.-Col. H. B. St. John, C.I.E.

HARAOTI AND TONK.

Political Agent—Major H. R. Lawrence.

SOUTHERN RAJPUTANA STATE.

Political Agent—Major D. M. Field.

CENTRAL INDIA AGENCY.

Central India is the name given to the country occupied by the Native States grouped together under the supervision of the Political Officer in charge of the Central India Agency. These States lie between 21° 24′ and 26° 32′ N. lat. and between 74° 0′ and 83° 0′ E. long. The British districts of Jhansi and Lalitpur divide the agency into two main divisions—Bundelkhand and Baghelkhand lying to the east, and Central India proper to the west. The total area covered is 78,772 square miles, and the population (1911) amounts to 93,980. The great majority of the people are Hindus. The principal States are eight in number—Gwalior, Indore, Bhopal, Rewa, Dhar, Jaora, Datia and Orcha of which two, Bhopal and Jaora, are Mahomedan and the rest are Hindu. Besides these there are a multitude of petty States held by their rulers under the immediate guarantee of the British Government, but having feudal relations with one or other of the larger States. The total number of States amounts to 153. For administrative purposes they are divided into the following groups: Baghelkhand Agency, 12 States (principal State Rewa); Bhopal Agency, 19 States (principal State Bhopal); Bhopawar Agency, 21 States (principal State Dhar); Bundelkhand Agency, 22 States (principal States, Datia and Orcha); Gwalior Agency, 32 States (principal State, Gwalior); Indore Residency, 9 States (principal State, Indore); Malwa Agency, 38 States (principal State, Jaora). The Agency may be divided into three natural divisions, the plateau, lowlying, and hilly. The plateau tract includes the Malwa plateau, the Highland tract stretching from the

great wall of the Vindhyas to Marwar, the land of open rolling plains. The lowlying tract embraces Northern Gwalior and stretches across into Bundelkhand and Baghelkhand up to the Kaimur Range. The hilly tract lies along the ranges of the Vindhyas and the Satpuras. There agriculture is little practised, the inhabitants being mostly members of the wild tribes. The territories of the different States are much intermingled, and their political relations with the Government of India and each other are very varied. Eleven Chiefs have direct treaty engagements with the British Government.

The following list gives the approximate size, population and revenue of the eight principal States above mentioned :—

Name.	Area in square miles.	Population.	Revenue.
			Rs lakhs
Gwalior ..	25,133	3,102,279	140
Indore ..	9,506	1,007,856	70
Bhopal ..	6,902	730,383	30
Rewah ..	13,000	1,514,843	53
Dhar ..	1,783	154,070	9
Jaora ..	568	75,951	8
Datia ..	911	154,603	9
Orcha ..	2,079	330,032	11

Gwalior.—The house of Scindia traces its descent to a family of which one branch held the hereditary post of patel in a village near Satara. The head of the family received a patent of rank from Aurangzebe. The founder of the Gwalior House was Ranoji Scindia who is said to have held a military rank under the Peshwa Baji Rao. In 172o the Peshwa granted deeds to Puar, Holkar and Scindia, empowering them to levy "Chauth" and "Sardesmukhi" and retain half the amount for payment to their troops. In 1736 Ranoji Scindia accompanied Baji Rao to Delhi where he and Mulhar Rao Holkar distinguished themselves in military exploits. Ranoji fixed his headquarters at the ancient city of Ujjain, which for the time became the Capital of the Scindia dominions. During the time of Mahadji Scindia and Dowlat Rao Scindia Gwalior played an important part in shaping the history of India. Despite the partial reverses which Mahadji Scindia's troops suffered at the hands of the British in 1780 reverses which led to the treaty of Salbai (1782), Scindia's power remained unbroken. For the first time he was now recognized by the British as an independent sovereign and not as a vassal of the Peshwa.

In 1790 his power was firmly established in Delhi. While he was indulging ambitious hopes he fell a prey to fever which ended his remarkable career on 12th February, 1794. Himself a military genius, Mahadji Scindia's armies reached the zenith of their glory under the disciplined training of the celebrated French adventurer—De Boigne. Mahadji was succeeded by his grand-nephew Daulat Rao in whose service Perron, a Military Commander of great renown played a leading part. The strength of Scindia's Army was, however, considerably weakened by the reverses sustained at Ahmednagar, Assaye, Asirgarh and Laswari. Daulat Rao Scindia died in 1827. Till his death he remained in undisputed possession of almost all the territory which belonged to him in 1805.

Daulat Rao was succeeded by Jankoji Rao who passed away in the prime of life. On his demise in 1843 intrigue and party spirit were rampant and the Army was in a state of mutiny with the result that it came into collision with the British forces at Maharajpore and Pannihar.

Jankoji Rao was succeeded by Jiaji Rao, whose adherence to the British cause during the dark days of Mutiny, when his own troops deserted him, was unshakeable. In 1861 he was created a Knight Grand Commander of the Most Exalted Order of the Star of India and in 1877 was made a Councillor of the Empress. Subsequently he received other titles and entered into treaties of mutual exchange of territories with the British Government. He died on the 20th June 1886 and was succeeded by his son Maharaja Madho Rao Scindia.

The present ruler is Lieutenant-General H. H. Maharaja Sir Madho Rao Scindia, Alijah Bahadur, G.C.V.O., G.C.S.I., G.B.E., A.D.C. to the King. He succeeded in 1886 and obtained powers in 1894. In 1901 he went to China during the war; he holds the rank of honorary Lieutenant General of the British Army and the honorary degrees of LL.D., Cambridge, and D.C.L., Oxon. He is also a Donat of the Order of St. John of Jerusalem in England The Ruler of the State enjoys a salute of 21 guns. The State is in direct relations with the Government of India. The State administration is controlled by the Maharaja assisted by nine members of the Majlis-i- khas with portfolios.

The northern part of the State is traversed by the G. I. P. Railway and two branches run from Bhopal to Ujjain and from Bina to Baran. The Gwalior Light Railway runs for 250 miles from Gwalior to Bhind, from Gwalior to Sheopur and from Gwalior to Shivpuri. The main industries are cotton ginning, which is done all over the State; fine muslins made at Chanderi, leather work, etc. The State maintains three regiments of Imperial Service Cavalry, two battalions of Imperial Service Infantry and a transport corps. Lashkar, the capital city, is two miles to the south of the ancient city and the fort of Gwalior. Annual income about 2 crores and expenditure about 175 lakhs.

Indore.—The Holkars of Indore belong to the shepherd class, the founder of the house, Malhar Rao Holkar, being born in 1693. His soldierly qualities brought him to the front under the Peshwa, who took him into his service and employed him in his conquests. When the Maratha power was broken at the battle of Panipat, in 1761, Malhar Rao had acquired vast territories stretching from the Deccan to the Ganges. He was succeeded by a lunatic grandson who again was succeeded by his mother, Ahilya Bai, whose administration is still looked upon as that of a model ruler. Disputes as to the succession and other causes weakened this powerful State, and when it assumed a hostile attitude on the outbreak of war in 1817 between the British and the Peshwa, Holkar was compelled to come to terms. The Treaty of Mandasor in 1818 still governs the regulations existing between the State and

the British Government. In the Mutiny of 1857, when Holkar was unable to control his troops he personally gave every possible assistance to the authorities at Mhow.

In 1903 Sivaji Rao, who died in 1908, abdicated in favour of his son, His Highness Maharaja Tukoji Rao Holkar, the present ruler, who was born in 1890, and was formally invested with ruling powers in November 1911. In the administration His Highness is assisted by his Chief Minister and a Council of 5 Ministers. The State Army consists of 519 Imperial Service Troops and 1,629 State forces. The capital is Indore City on the Ajmer-Khandwa Section of the Rajputana-Malwa Railway. The ordinary revenue is estimated at about a crore of rupees.

Bhopal.—The principal Mussalman State in Central India ranks next in importance to Hyderabad among the Muhammadan States of India. The ruling family was founded by Dost Mohammed Khan, a Tirah Afghan He was granted a *Sanad* of Bairasia and Nazirabad *Purgannahs* in recognition of his meritorious services to the Emperor of Delhi. With the disintegration of the Mogul Empire Bhopal State developed into an independent State. In the early part of the 19th century, the Nawabs successfully withstood the inroads of Scindia and Bhonsla and by the agreement of 1817 Bhopal undertook to assist the British with a contingent force and to co-operate against the Pindari bands.

The present Ruler of the State, Her Highness Nawab Sultan Jahan Begum, C. I., G.C.S.I., G.C.I.E., G.B.E., is the third in the successive line of lady-rulers, who have ruled the destinies of the State with marked ability. Having succeeded in 1901, she personally conducts, and has introduced a number of reforms in, the administration of her State. Her eldest son, Hon. Colonel Nawab Mahommad Sir Nasrullah Khan, K.C.S.I., controls the Forest Department and her second son Hon. Major Nawabzada Mahommad Obaidullah Khan, C.S.I., who holds the rank of Brig-Gen. in the State Army, is the Commander-in-Chief of the State Forces, while the youngest Nawabzada Mahommad Hamidullah Khan, B.A., C.S.I., and Hon. Lieut.-Colonel in the Bhopal Army, is the head of her Highness' Secretariat. Khan Bahadur Maulvi Mohamed Matinuzzaman Khan, B.A., F.S.S., Revenue Minister, is in charge of the Revenue and Executive Branches of the States Services and Dabirulmulk Sir Israr Hasan Khan, Khan Bahadur. KT., C.I.E., Judicial Minister, controls the Judicial Department. The State maintains one regiment each of Imperial Service Cavalry and Infantry. The capital, Bhopal City, on the northern bank of an extensive lake is situated at the junction of the G. I. P. Ry. with the Bhopal Ujjain Railway.

Rewah.—This State lies in the Baghelkhand Agency and falls into two natural divisions separated by the scrape of the Kaimur range. The area is 13,000 sq. miles with a population of 14 lakhs. Its Chiefs are Baghel Rajputs descended from the Solanki clan which ruled over Gujarat from the tenth to the thirteenth century. In 1812, a body of Pindaries raided Mirzapur from Rewah territory and the Prince, who had previously rejected overtures for an alliance, was called upon to accede to a treaty acknowledging the protection of the British Government. During the Mutiny, Rewah offered troops to the British, and for his services then, various parganas, which had been seized by the Marathas, were restored to the Rewah Chief. The present chief is H. H. Maharaja Gulab Singhji Bahadur who was born in 1903. He was married in 1919 to the sister of His Highness the Maharaja of Jodhpur. Being a minor the administration is conducted by a Council of Regency with His Highness Maharaja Sir Sajjan Singhji Bahadur, K.C.S.I., Maharaja of Rutlam, as Regent of the State. The State force consists of about 1,700 men. The State or famous for its archæological remains and is rich in minerals, coal being mined at Umaria. The average receipts are 40 lakhs.

Dhar.—This State, under the Agency for Southern States in Central India, takes its name from the old city of Dhar, long famous as the capital of the Paramara Rajputs, who ruled over Malwa from ninth to the thirteenth century and from whom the present chiefs of Dhar—Powar Marathas—claim descent. In the middle of the 18th century the Chief of Dhar, Anand Rao, was one of the leading chiefs of Central India, sharing with Holkar and Scindia the rule of Malwa. But in 1819, when a treaty was made with the British, the State had become so reduced that it consisted of little more than the capital. The ruler is H. H. Maharaja Sir Udaji Rao Powar, K.C.S.I., K.B.E., who was born in 1886, and has control of all civil, criminal, and all administrative matters. There are 22 feudatories, of whom 13 hold a guarantee from the British Government. The average expenditure is about 12 lakhs.

Jaora State.—This State is in the Malwa Agency covering an area of about 600 square miles with a total population of 85,817, and has its headquarters at Jaora town. The Chiefs of Jaora claim descent from Abdul Majid Khan, an Afghan of the Tajik Khel, from Swat, who came to India to acquire wealth. The first Nawab was Ghafur Khan who obtained the State about the year 1818. The present chief is Major H. H. Nawab Sir Mahomad Iftikhar Ali Khan Bahadur, K.C.I.E., who was born in 1883 and is an Honorary Major in the Indian Army. The administration is at present controlled by a Council of State of which His Highness the Nawab is the President. Khan Saheb J. Rustamji, B.A., is the Chief Secretary to His High ness and Vice-President of the State Council. The Council is constituted of a President, a Vice-President and three other members. The soil of the State is among the richest in Malwa, being mainly of the best black cotton variety bearing excellent crops of poppy. The average annual revenue is Rs. 10 lakhs.

Rutlam—Is the premier Rajput State in the Malwa Agency. It covers an area of 871 square miles, including that of the Jagir of Khera in the Kushalgarh Chiefship, which pays an annual tribute to the Rutlam Darbar. The State was founded by Raja Ratansinghji, a great grandson of Raja Udai Singh of Jodhpur, in 1652. The Raja of Rutlam is the religious head of the Rajputs of Malwa, and important caste questions are referred to him for decision. The State enjoys full and final civil and criminal

powers. The present Chief of Rutlam is Colonel His Highness Maharaja Sir Sajjan Singh, K.C.S.I., who was born in 1880, educated at Daly College, Indore, received military training in Imperial Cadet Corps and invested with full powers in 1898. The administration is carried on under him by Rutlam State Council composed of three members. His Highness served in the war in France and Egypt from 1915 to 1918, was mentioned in despatches and received the Criox d'Officiers de legion d'Honneur. He is also Regent of Rewa State. Salute: 13 guns, local 15 guns.

Senior Member of Council—Khan Sahib D. F. Vakil.

Datia State.—The chiefs of this State, in the Bundelkhand Agency, are Bundela Rajputs of the Orchha house. The territory was granted by the chief of Orchha to his son Bhagwan Rao in 1626, and this was extended by conquest and by grants from the Delhi emperors. The present chief is H. H. Maharaja Lokendra Sir Govind Singh Bahadur, K.C.S.I., who was born in 1886 and succeeded in 1907. The heir-apparent, Raja Bahadur Balbhadra Singh (*b* 1907), is being educated at the Daly College.

Orchha State.—The rulers of this State are Bundela Rajputs claiming to be descendants of the Gaharwars of Benares. It was founded as an independent State in 1048 A. D. It entered into relations with the British by the treaty made in 1812. The present ruler is His Highness Sir Pratap Singh, G.C.S.I., G.C.I.E., who was born in 1854. He has the titles of His Highness Saramad-i-rajhai-Bundelkhand Maharaja Mahendra Sawai Bahadur. The present chief enjoys a salute of 17 guns. The State has a population of 330,032 and an area of 2,080 square miles. The capital is Tikamgarh, 36 miles from Lalitpur Station, on the G. I. P. Railway. Orchha, the old capital, has fallen into decay but is a place of interest on account of its magnificent buildings of which the finest were erected by Maharaja Bir Singh Deo, the most famous ruler of the [illegible] (1605-1627).

Agent to Governor-General—Lt.-Col. F. G. Beville, C.S.I. C.I.E., I.A.

GWALIOR.

Resident—W. E. Jardine, C.I.E., I.C.S.

BHOPAL.

Political Agent—Major H. R. N. Pritchard.

BUNDELKHAND.

Political Agent—L. M. Crump.

BAGHELKHAND.

Political Agent—Major E. J. D. Colvin.

Sikkim.

Sikkim is bounded on the north and north-east by Tibet, on the south-east by Bhutan, on the south by the British district of Darjeeling, and on the west by Nepal. The population consists of Bhutias, Lepchas, and Nepalese. It forms the direct route to the Chumbi Valley in Tibet. The main axis of the Himalayas, which runs east and west, forms the boundary between Sikkim and Tibet. The Singalila and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepal on the west, and from Tibet and Bhutan on the east. On the Singalila range rise the great snow peaks of Kinchinjunga (28,146 feet), one of the highest mountains in the world. The Chola range which is much loftier than that of Singalila, leaves the main chain at the Dongkya La.

Tradition says that the ancestors of the Rajas of Sikkim originally came from eastern Tibet. The State was twice invaded by the Gurkhas at the end of the eighteenth century. On the outbreak of the Nepal War in 1814, the British formed an alliance with the Raja of Sikkim and at the close of the war the Raja was rewarded by a considerable cession of territory. In 1835 the Raja granted the site of Darjeeling to the British and received Rs. 12,000 annually in lieu of it. The State was previously under the Government of Bengal, but was brought under the direct supervision of the Government of India in 1906. The State is thinly populated, the area being 2,818 square miles, and the population 87,920, chiefly Buddhists and Hindus. The most important crops are maize and rice. There are several trade routes through Sikkim from Darjeeling District into Tibet. In the convention of 1890 provision was made for the opening of a trade mart but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the despatch of a mission to Lhasa, where a new convention was signed. Trade with the British has increased in recent years, and is now between 40 and 50 lakhs yearly. A number of good roads have been constructed in recent years. The present ruler, His Highness Maharajah Tashi Namgyal, C.I.E., was born in 1893 and succeeded in 1914. His Highness was invested with full ruling powers on the 5th April 1918. The title of a C.I.E. was conferred upon the Maharaja on the 1st January 1918. The average revenue is Rs. 2,62,000.

Officiating Political Officer in Sikkim:—Major F. M. Bailey, C.I.E.

Bhutan.

Bhutan extends for a distance of approximately 190 miles east and west along the southern slopes of the central axis of the Himalayas, adjacent to the northern border of Eastern Bengal and Assam. Its area is 18,000 square miles and its population, consisting of Buddhists and Hindus, has been estimated at 300,000. The country formerly belonged to a tribe called Tek-pa, but was wrested from them by some Tibetan soldiers about the middle of the seventeenth century. British relations with Bhutan commenced in 1772 when the Bhotias invaded the principality of Cooch Behar and British aid was invoked by that State. After a number of raids by the Bhutanese into Assam, an envoy (the Hon. A. Eden) was sent to Bhutan, who was grossly insulted and compelled to sign a treaty surrendering the Duars to Bhutan. On his return the treaty was disallowed and the Duars annexed. This was followed by the treaty of 1865, by which the State's relations with the Government of India were satisfactorily regulated. The State formerly received an allowance

of half a lakh a year from the British Government in consideration of the cession in 1865 of some areas on the southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. On the occasion of the Tibet Mission of 1904, the Bhotias gave strong proof of their friendly attitude. Not only did they consent to the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop accompanied the British troops to Lhasa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained the British Agent hospitably at his capital. The ruler is now known as H. H. the Maharaja of Bhutan, Sir Uggen Wangchuk, K.C.S.I., K.C.I.E. At the head of the Bhutan Government, there are nominally two supreme authorities; the Dharma Raja, known as Shapting Renipoche, the spiritual head; and the Deb or Depa Raja, the temporal ruler. The Dharma Raja is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there are several hundreds. On the death of a Dharma Raja a year or two is allowed to elapse, and his reincarnation then takes place, always in the Choje, or royal family of Bhutan.

Cultivation is backward and the chief crop is maize. The Military force consists of local levies under the control of the different chiefs. They are of no military value.

Nepal.

The kingdom of Nepal is a narrow tract of country extending for about 520 miles along the southern slope of the central axis of the Himalayas. It has an area of about 54,000 square miles, with a population of about 5,000,000, chiefly Hindus. The greater part of the country is mountainous, the lower slopes being cultivated. Above these is a rugged broken wall of rock leading up to the chain of snow-clad peaks which culminate in Mount Everest (29,002 feet) and others of slightly less altitude. The country before the Gurkha occupation was split up into several small kingdoms under Newar kings. The Gurkhas under Prithvi Narayan Shah overran and conquered the different kingdoms of Patan, Kathmandu, and Bhatgaon, and other places during the latter half of the 18th century and since then have been rulers of the whole of Nepal. In 1846 the head of the Rana family obtained from the sovereign the perpetual right to the office of Prime Minister of Nepal, and the right is still enjoyed by his descendant. In 1850 Jung Bahadur paid a visit to England and was thus the first Hindu Chief to leave India and to become acquainted with the power and resources of the British nation. The relations of Nepal with the Government of India are regulated by the treaty of 1816 and subsequent agreements by which a representative of the British Government is received at Kathmandu. By virtue of the same treaty Nepal maintains a Representative at Delhi and her treaty relations with Tibet allow her to keep a Resident at Lhassa of her own. Her relation with China is of a friendly nature. Ever since the conclusion of the treaty of 1816 the friendly relations with the British Government have steadily been maintained and during the rule of the present Prime Minister it has been at its height as is evidenced by the valuable friendly help in men and money which has been given and which was appreciatively mentioned in both the Houses of Parliament and by Mr. Asquith in his Guildhall speech in 1915. The message from His Majesty the King Emperor to the Nepalese Prime Minister sent on the termination of hostilities and published at the time as also the Viceroy's valedictory address to the Nepalese contingent on the eve of their return home after having laudably fulfilled their mission in India eloquently and gratefully acknowledged the valuable help rendered by Nepal during the four and a half years of war.

From the foregoing account of the history of Nepal it will be seen that the Government of the country has generally been in the hands of the Minister of the day. Since the time of Jung Bahadur this system of government has been clearly laid down and defined. The sovereign, or Maharajadhiraja, as he is called, is but a dignified figure-head, whose position can best be likened to that of the Emperor of Japan during the Shogunate. The present ruler, His Majesty Maharajadhiraja Tribhubana Bir Bikram Jung Bahadur Shah Bahadur Shum Shere Jung, ascended the throne on the death of his father in 1911. The real ruler of the country is the Minister who, while enjoying complete monopoly of power, couples with his official rank the exalted title of Maharaja. Next to him comes the Commander-in-Chief, who ordinarily succeeds to the office of Minister.

The present Minister at the head of affairs of Nepal is Maharaja Sir Chandra Shum Shere Jung Bahadur Rana, G.C.B., G.C.S.I., G.C.M.G., G.C.V.O., D.C.L. Thong-lin-pimma-Kokang-wang-Syan (Highest honour in the Chinese military order) and Honorary General in the British Army. He has been Prime Minister and Marshal of Nepal since June, 1901.

Rice, wheat and maize form the chief crops in the lowlands. Mineral wealth is supposed to be great, but, like other sources of revenue, has not been developed. Communications in the State are primitive. The revenue is about two crores of rupees per annum. The standing army is estimated at 45,000, the high posts in it being filled by relations of the Minister. The State is of considerable archæological interest and many of the sites connected with scenes of Buddha's life have been identified in it by the remains of inscribed pillars.

British Envoy: Lieut.-Col. W. F. T. O'Connor, C.I.E.

NORTH-WEST FRONTIER STATES.

The native states of the North-West Frontier Provinces are Amb, Chitral, Dir and Phulera. The total area is about 7,704 square miles and the population, mainly Mahomedan, is 1,622,094. The average annual revenue of the first three is about Rs. 4,65,000; that of Phulera is unknown.

Amb.—Is only a village on the western bank of the Indus in Independent Tanawala.

Chitral.—Runs from Dir to the south of the Hindu-Kush range in the north, and has an area of about 4,500 square miles. The ruling dynasty has maintained itself for more than three hundred years, during the greater part of which the State has constantly been at war with its neighbours. It was visited in 1885 by the Lockhart Mission, and in 1889, on the establishment of a political agency in Gilgit, the ruler of Chitral received an annual subsidy from the British Government. That subsidy was increased two years later on condition that the ruler, Amam-ul-Mulk, accepted the advice of the British Government in all matters connected with foreign policy and frontier defence. His sudden death in 1892 was followed by a dispute as to the succession. The eldest son Nizam-ul-Mulk was recognised by Government, but he was murdered in 1895. A religious war was declared against the infidels and the Agent at Gilgit, who had been sent to Chitral to report on the situation, was besieged with his escort and a force had to be despatched (April 1895) to their relief.

The three valleys of which the State consists are extremely fertile and continuously cultivated. The internal administration of the country is conducted by the Mehtar, Shuja-ul-mulk, and the foreign policy is regulated by the Political Agent.

Dir.—The territories of this State, about 5,000 square miles in area, include the country drained by the Panjkora and its affluents down to the junction of the former river with the Bajaur Rud. The Nawab of Dir is the overlord of the country, exacting allegiance from the petty chiefs of the clans Dir is mainly held by Yusufzai Pathans, the old non-Pathan inhabitants being now confined to the upper portion of the Panjkora Valley known as the Bashkar.

Political Agent for Dir, Swat and Chitral: Major W. G. Neale, I. A.

NATIVE STATES UNDER LOCAL GOVERNMENTS.

The Madras Presidency includes 5 Native States covering an area of 10,087 square miles. Of these the States of Travancore and Cochin represent ancient Hindu dynasties. Pudukottai is the inheritance of the chieftain called the Tondiman. Banganapalle and Sandur, two petty States, of which the first is ruled by a Nawab, lie in the centre of two British districts.

Name.	Area sq. miles.	Population.	Approx. Revenue in lakhs of rupees.
Travancore ..	7,129	3,428,975	128
Cochin ..	1,361	918,110	47
Pudukottai ..	1,178	411,878	16
Banganapalle ..	255	39,356	2·8
Sandur ..	161	13,517	1·7

Travancore.—This State occupies the south-west portion of the Indian Peninsula, forming an irregular triangle with its apex at Cape Comorin. The early history of Travancore is in great part traditional; but there is little doubt that H. H. the Maharaja is the representative of the Chera dynasty, one of the three great Hindu dynasties which exercised sovereignty at one time in Southern India. The petty chiefs, who had subsequently set up as independent rulers within the State, were all subdued, and the whole country, included within its present boundaries, was consolidated and brought under one rule, by the Maharaja Marthanda Varma (1729-58). The English first settled at Anjengo, a few miles to the north of Trivandrum, and built a factory there in 1684. In the wars in which the East India Company were engaged in Madura and Tinnevelly, in the middle of the 18th century, the Travancore State gave assistance to the British authorities. Travancore was reckoned as one of the staunchest allies of the British Power and was accordingly included in the Treaty made in 1784 between the East India Company and the Sultan of Mysore. To protect the State from possible inroads by Tippu, an arrangement was come to in 1788 with the East India Company, and in 1795 a formal treaty was concluded, by which the Company agreed to protect Travancore from all foreign enemies. In 1805 the annual subsidy to be paid by Travancore was fixed at 8 lakhs of rupees.

The present ruler is His Highness Maharaja Sir Rama Varma, G.C.S.I., G.C.I.E., who was born in 1857 and ascended the masnad in 1885. The government is conducted in his name with the assistance of a Dewan (Dewan Bahadur T. Raghavayya). The work of legislation is entrusted to a Council brought into existence in 1888. An assembly known as the Sri Mulam Popular Assembly meets once a year, when its members are able to bring suggestions before the Dewan. The State supports a military force of 1,472 men. Education has advanced considerably in recent years and the State takes a leading place in that respect. The principal food grain grown is rice, but the main source of agricultural wealth is the cocoanut. Other crops are pepper, areca-nut, jack-fruit and tapioca. Cotton weaving and the making of matting from the coir are among the chief industries. The State is well provided with roads, and with a natural system of back-waters, besides canals and rivers navigable for country crafts. Two lines of railways intersect the country, the Cochin-Shoranore in the north-west and the Tinnevelly-Quilon passing through the heart of the State. A third line, from Quilon to Trivandrum, was opened on the 1st January 1918. The capital is Trivandrum.

Political Agent: H. H. Burkitt, I.C.S.

Cochin.—This State on the south-west coast of India is bounded by the Malabar District of the Madras Presidency and the State of Travancore,

Very little is known of its early history. According to tradition, the Rajas of Cochin hold the territory in right of descent from Cheraman Perumal, who governed the whole country of Kerala, including Travancore and Malabar, as Viceroy of the Chola Kings about the beginning of the ninth century, and afterwards established himself as an independent Ruler. In 1502, the Portuguese were allowed to settle in what is now British Cochin and in the following year they built a fort and established commercial relations in the State. In the earlier wars with the Zamorin of Calicut, they assisted the Rajas of Cochin. The influence of the Portuguese on the west coast began to decline about the latter part of the seventeenth century, and in 1663 they were ousted from the town of Cochin by the Dutch with whom the Raja entered into friendly relations. About a century later, in 1759, when the Dutch power began to decline, the Raja was attacked by the Zamorin of Calicut, who was expelled with the assistance of the Raja of Travancore. In 1776, the State was conquered by Hyder Ali, to whom it remained tributary and subordinate, and subsequently to his son, Tippu Sultan. A treaty was concluded in 1791 between the Raja and the East India Company, by which His Highness agreed to become tributary to the British Government for his territories which were then in the possession of Tippu, and to pay a subsidy.

His Highness Raja Sri Sir Rama Varmah, G.C.S.I., G.C.I.E., who was born in 1852, and who ascended the Masnad in 1895, having abdicated in December, 1914, His Highness Sri Sir Rama Varmah, G.C.I.E., who was born on 6th October, 1858, succeeded to the throne and was duly installed as Raja on the 21st January 1915. The administration is conducted under the control of the Raja whose chief Minister and Executive Officer is the Dewan, DeWan Bahadur T. Vijayaraghava Charya. The forests of Cochin form one of its most valuable assets. They abound in teak, ebony, blackwood, and other valuable trees. Rice forms the staple of cultivation. Cocoanuts are largely raised in the sandy tracts, and their products form the chief exports of the State. Communications by road and back-waters are good, and the State owns a line of railway from Shoranore to Ernakulam, the capital of the State, and a Forest Steam Tramway used in developing the forests. The State supports a force of 24 officers and 250 men.

Political Agent : H. H. Burkitt, I.C.S.

Pudukkottai.—This State is bounded on the north and west by Trichinopoly, on the south by Madura and on the east by Tanjore. In early times a part of the State belonged to the Chola Kings and the southern part to the Pandya Kings of Madura. Relations with the English began during the Carnatic wars. During the siege of Trichinopoly by the French in 1752, the Tondiman of the time did good service to the Company's cause by sending them provisions, although his own country was on at least one occasion ravaged as a consequence of his fidelity to the English. In 1756 he sent some of his troops to assist Muhammad Yusuf, the Company's sepoy commandant, in settling the Madura and Tinnevelly countries. Subsequently he was of much service in the wars with Haidar Ali. His services were rewarded by a grant of territory subject to the conditions that the district should not be alienated (1806). Apart from that there is no treaty or arrangement with the Raja. The present ruler is His Highness Sri Brihadamba Das, Sir Marthanda Bhairava Tondiman Bahadur, G.C.I.E., who is eighth in descent from the founder of the family. He succeeded in 1886. The Collector of Trichinopoly is ex-officio Political Agent for Pudukkottai. The administration of the State, under the Raja, is entrusted to a State Council of three members, a Superintendent, Dewan and Councillor. The various departments are constituted on the British India model. The principal food crop is rice. The forests, which cover about one-seventh of the State, contain only small Timber. There are no large industries. The State is well provided with roads, but Pudukkottai is the only municipal town in the State.

Political Agent: Rai Bahadur V. Rama Rao, B. A.

Banganapalle.—This is a small State in two detached portions which in the eighteenth century passed from Hyderabad to Mysore and back again to Hyderabad. The control over it was ceded to the Madras Government by the Nizam in 1800. The present ruler is Nawab Meer Ghulam Ali Khan Bahadur. The chief food grain is cholam. The Nawab pays no tribute and maintains no military force. Sericulture, lac cultivation and weaving industries have lately been started in the State.

Political Agent: F. W. Stewart, I.C.S.

Sandur.—The State is almost surrounded by the District of Bellary, the Collector of which is the Political Agent. After the destruction of the Empire of Vijayanagar in 1565 the State came to be held by semi-independent chiefs under the nominal sovereignty of the Sultan of Bijapur and in 1728 one of these chiefs, a Poligar of Bedar tribe, was turned out by an ancestor of the present Raja named Siddoji Rao of the Bhosle family of the famous Maharatta Chief Sivaji; they were Senapathies of Sivaji. In Siva Rao's time the State came under the Madras Government and his heirs in perpetuity with full powers, Civil and Criminal. In 1876 the title of Raja was conferred on the Chief as a hereditary distinction. The present Ruler is H. H. Raja Srimanth Venkata Rao Raj Saheb. He was born in 1892. He married Rani Srimanth Tara Raje, sister of the Raja of Akalkot, in the Bombay Presidency. The State is administered by the Raja and the Dewan (Meherban K. Hanumantha Rao). The Raja pays no tribute and maintains no military force. The most important staple crop is cholam. Teak and sandalwood are found in small quantities in the forests.

The minerals of the State possess unusual interest. The hematites found in it are probably the richest ore in India. An outcrop near the southern boundary forms the crest of a ridge 150 feet in height, which apparently consists entirely of pure steel grey crystalline hematite (specular iron) of intense hardness. Some of the softer ores used to be smelted, but the industry has been killed by the cheaper English iron. Manganese deposits have also been found in three places, and during 1911 to 1914 over 223,000 tons of manganese ore were transported by one company.

Political Agent: A. F. G. Moscardi, I.C.S.

UNDER THE GOVERNMENT OF BOMBAY.

More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor states are continually suffering disintegration. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admirals of the Deccan fleets, still remain. A few aboriginal chiefs, Bhils or Kolis, exercise an enfeebled authority in the Dangs and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their functions are confined to the giving of advice and the exercise of a general surveillance; in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

The Native States in the Bombay Presidency number 377. Area 65,761 square miles. Population (1911) 7,411,675. They are divided for administrative purposes into the following agencies:—Bijapur Agency, 2 states; Cutch Agency, 1 state; Dharwar Agency, 1 state (Savanur); Kaira Agency, 1 state (Cambay); Kathiawar Agency, 187 states (principal states, Bhavnagar, Dhrangadhra, Gondal, Junagadh, Nawanagar); West Khandesh Agency, 20 states; Kolaba Agency, 1 state (Janjira); Kolhapur Agency, 9 states (principal state Kolhapur, with 9 feudatory states); Mahi Kantha Agency, 51 states (principal state, Idar); Nasik Agency, 1 state (Surgana); Palanpur Agency, 17 states (principal state, Palanpur); Poona Agency, 1 state (Bhor); Rewa Kantha Agency, 62 states (principal State, Rajpipla); Satara Agency, 2 states; Savantvadi Agency, 1 state; Sholapur Agency, 1 state; Sukkur Agency, 1 state (Khairpur); Surat Agency, 17 states; Thana Agency, 1 state (Jauhar). The table below gives details of the area, etc, of the more important States:—

State.	Area in sq. miles	Population. (in 1911).	Approx. Revenue in lakhs of rupees.
Bhavnagar ..	2,860	441,367	47
Cutch ..	7,616	513,429	25
Dhrangadhra ..	1,156	79,142	12
Gondal ..	1,024	161,916	15
Idar ..	1,669	202,811	6
Junagadh ..	3,284	434,222	26
Khairpur ..	6,050	223,788	15
Kolhapur ..	3,165	833,441	57
Navanagar ..	3,791	349,400	22
Palanpur ..	1,750	226,250	5
Rajpipla ..	1,517	161,588	9

Bijapur Agency.—This comprises the Satara Jaghir of Jath (980·8 square miles in area). On the annexation of Satara, in 1849, Jath and Daphlapur like other Satara Jaghirs, became feudatories of the British Government. The latter has more than once interfered to adjust the pecuniary affairs of the Jath Jaghir and in consequence of numerous acts of oppression on the part of the then ruler was compelled to assume direct management from 1874 to 1885. The small Estate of Daphlapur with an area of 96·8 square miles lapsed to the Jath Jaghir on the demise of its last ruler Ranibai Saheb Daphle in January 1917. The Chief of Jath who belongs to the Maratha caste, ranks as a first class Sardar. He holds a sanad of adoption, and the succession follows the rule of primogeniture. The gross revenue of the State is about 3 lakhs chiefly derived from land revenue. The Jath State pays to the British Government Rs. 6,400 per annum in lieu of horse contingent and Rs. 4,840 on account of Sardeshmukhi rights.

Political Agent.—C. G. Henderson, F.C.S., Collector of Bijapur.

Cutch.—The State is bounded on the north and north-west by Sind, on the east by the Palanpur Agency, on the south by the Peninsula of Kathiawar and the Gulf of Cutch and the south-west by the Indian Ocean. Its area, exclusive of the great salt marsh called the Rann of Cutch, is 7,616 square miles. The capital is Bhuj, where the ruling Chief (the Maharao His Highness Maha Rao Sri Khengarji

Savai Bahadur, G.C.S.I., G.C.I.E., resides. From its isolated position, the special character of its people, their peculiar dialect, and their strong feeling of personal loyalty to their ruler, the peninsula of Cutch has more of the elements of a distinct nationality than any other of the dependencies of Bombay. The earliest historic notices of the State occur in the Greek writers. Its modern history dates from its conquest by the Sind tribe of Samma Rajputs in the fourteenth century. The section of the Sammas forming the ruling family in Cutch were known as the Jadejas or 'children of Jada.' The British made a treaty with the State in 1815. There is a fair proportion of good arable soil in Cutch, and wheat, barley and cotton are cultivated. Both iron and coal are found but are not worked. Cutch is noted for its beautiful embroidery and silverwork and its manufactures of silk and cotton are of some importance. Trade is chiefly carried by sea. The ruling chief is the supreme authority. A few of the Bhayats are invested with jurisdictional powers in varying degrees in their own Estates and over their own ryots. A notable fact in connection with the administration of the Cutch State is the number and position of the Bhayat. These are Rajput nobles forming the brotherhood of the Rao. They were granted a share in the territories of the ruling chief as provision for their maintenance and are bound to furnish troops on an emergency. The number of these chiefs is 137, and the total number of the Jadeja tribe in Cutch is about 16,000. The British military force having been withdrawn from Bhuj, the State now pays Rs. 82,257 annually as an Anjar equivalent to the British Government. The military force consists of about 1,000 in addition to which, there are some irregular infantry, and the Bhayats could furnish on requisition a mixed force of four thousand.

Political Agent: Lt.-Col. Edward O'Brien.

Dharwar Agency.—This comprises only the small State of Savanur. The founder of the reigning family who are Mahomedans of Pathan origin was a Jagirdar of Emperor Aurangzebe. At the close of the last Maratha War the Nawab of Savanur, whose conduct had been exceptionally loyal, was confirmed in his possessions by the British Government. The State pays no tribute. The principal crops are jwari and cotton. The area is 70 square miles and population 16,825. The revenue is about Rs. 1,38,000. The present chief is Captain Abdul Majidkhan Dilerjang Bahadur.

Political Agent: H. L. Painter, I.C.S.

Kaira Agency.—This includes only the State of Cambay at the head of the Gulf of the same name. Cambay was formerly one of the chief ports of India and of the Anhilvada Kingdom. At the end of the thirteenth century it is said to have been one of the richest towns in India; at the beginning of the sixteenth century also it formed one of the chief centres of commerce in Western India. Factories were established there by the English and the Dutch. It was established a distinct State about 1730, the founder of the present family of Chiefs being the last but one of the Mahomedan Governors of Gujarat. The present Nawab is His Highness Mirza Hussein Yawar Khan who is a Shiah Mogul of the Najumisani family of Persia, and was born on the 16th May, 1911. His father, the late Nawab Jaffar Ali Khan, died on 21st January, 1915, leaving him a minor. The State is therefore under British Administration. The State pays a tribute of Rs. 21,924 to the British Government. Wheat and cotton are the principal crops. There is a broad gauge line from Cambay to Petlad, connecting with the B. B. & C. I. Railway at Anand. Cambay is a first class State having full jurisdiction. Revenue is about six lakhs. The area of the State is 350 square miles, population 71,715.

Political Agent: J. H. Garrett, I.C.S.

Kathiawar Agency.—Kathiawar is the peninsula or western portion of the Province of Gujarat, Bombay. Its extreme length is about 220 miles and its greatest breadth about 165 miles, the area being 23,445 square miles. Of this total about 20,882 square miles with a population of 2,542,535 is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control nearly 200 separate States whose chiefs divided amongst themselves the greater portion of the peninsula. The Kathiawar Agency is divided for administrative purposes into four prants or divisions—Jhalawar, Halar, Sorath and Gohilwar—and the States have since 1863 been arranged in seven classes. Since 1822 political authority in Kathiawar has been vested in the Political Agent (now Agent to the Governor) subordinate to the Government of Bombay. In 1902 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the prants. Before 1863, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbars of the several States in the trial of heinous crimes, interference with the judicial administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. The four Political Agents of the prants resident in the four divisions of Kathiawar, now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a prant has a deputy, who resides at the headquarters of the prant or division, and exercises subordinate civil and criminal powers. Serious criminal cases are committed by the Deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. The Agent to the Governor is assisted at Headquarters by a Personal Assistant and two Deputy Political Agents. Of the latter the Daftardar is head of the Hazur Office and the Hazur Accounts Officer attends to Treasury business.

Agent to the Governor in Kathiawar: Lt.-Col. Wood (*Offg.*)

Bhavnagar.—This State lies at the head and west side of the Gulf of Cambay. The Gohel Rajputs, to which tribe the Ruler of Bhavnagar belongs, are said to have settled in the country about the year 1260, under Sajakji from whose three sons—Ranoji, Saranji and Shahji—are descended respectively the chiefs of Bhavnagar, Lathi and Palitana. An intimate connexion was formed between the Bombay Government and Bhavnagar in the eighteenth century when the chief of that State took pains to destroy the pirates which infested the neighbouring seas The State was split up when Gujarat and Kathiawar were divided between the Peshwa and the Gaekwar; but the various claims over Bhavnagar were consolidated in the hands of the British Government in 1807. The State pays an annual tribute of Rs. 1,28,060 to the British Government, Rs. 3,581-8-0 as Peshkashi to Baroda, and Rs. 22,858 as Zortalbi to Junagadh. During the minority of His Highness the Minor Maharaja Krishna Kumarsinhji who succeeded to the *gadi* on the death of his father, Maharaja Sir Bhavsinhji, K.C.S.I., on 17th July 1919, the administration of the State has been entrusted to a Council of Administration. The Council consists of Sir Prabhashankar D. Pattani, K.C.I.E., as President, and Major R. C. Burke as Vice-President. The other members of the Council are Messrs. I. K. Trivedi and S. A. Goghawala, M.A., LL.B.. One noteworthy feature in the administration is the complete separation of judicial from executive functions and the decentralisation of authority is another. The authority and powers of all the Heads of Departments have been clearly defined, and each within his own sphere is independent of the others, being directly responsible to the Council.

The chief products of the State are grain, cotton and salt. The chief manufactures are oil, copper and brass vessels and cloth. The Bhavnagar State Railway is 205 miles in length. The capital of the State is the town and port of Bhavnagar, which has a good and safe harbour for shipping and carries on an extensive trade as one of the principal markets and harbours of export for cotton in Kathiawar. Bhavnagar supports 300 Imperial Service Lancers and 282 Infantry of Armed Police.

Population (in 1921) was 426,404 of whom 86 per cent. were Hindus and 8 per cent Mahomedans.

Dhrangadhra State is a State of the First Class in Kathiawar with a population of nearly one lakh and an area of 1,167 square miles exclusive of the Dharangadhra portion of the Runn of Kutch. The Ruler of Dhrangadhra is the head of the Jhala family of Rajputs, originally called the Makvanas. This Rajput clan is of great antiquity having migrated to Kathiawar from the North, establishing itself first at Patri in the Ahmedabad District, thence moving to Halvad and finally settling in its present seat. Being the guardians of the North-Eastern marches of Kathiawar they had to suffer repeatedly from the successive inroads of the Mahomedans into that Peninsula, but after suffering the various vicissitudes of war they were confirmed in their possession of Halvad, its surrounding territories and the salt pans attached thereto by an Imperial Firman issued by Emperor Aurangzeb. The States of Vankaner, Limbdi, Wadhwan, Chuda, Sayla and Than-Lakhtar are offshoot from Dhrangadhra. His Highness Maharana Shri Sir Ghanshyamsinhji, K.C.S.I., Maharaja Raj Saheb is the ruler of the State and the titular head of all the Jhalas. The administration is conducted under the Maharaja's directions by the Dewan Rana Shri Mansinhji S. Jhala, C.I.E. The soil being eminently fit for cotton cultivation, the principal crops are long stapled cotton and cereals of various kinds. Excellent building and ornamental stone is quarried from the hills situated within the State. The capital town is Dhrangadhra, a fortified town, 75 miles West of Ahmedabad.

Dhrangadhra State owns the Railway from Wadhwan Junction to Halvad, a distance of 40 miles, which is worked by the B. B. & C. I. Railway. The State has been authorised to extend this line up to Mahya on the borders of the Runn.

Gondal State—The Ruling Prince of Gondal is a Rajput of the Jadeja stock with the title of H. H. Thakore Sahib, the present Ruler being H. H. Shri Bhagvat Sinhji, G.C.I.E. The early founder of the State, Kumbhoji I., had a modest estate of 20 villages. Kumbhoji II., the most powerful Chief of the House, widened the territories to almost their present limits by conquest; but it was left to the present ruler to develop its resources to the utmost, and in the words of Lord Reay, Governor of Bombay, by its "importance and advanced administration" to get it recognised as a First Class State. The State pays a tribute of Rs. 1,10,721. The chief products are cotton and grain and the chief manufactures are cotton and woollen fabrics and gold embroidery. Gondal has always been preeminent amongst the States of its class for the vigour with which public works have been prosecuted, and was one of the earliest pioneers of railway enterprise in Kathawar, having initiated the Dhasa-Dhoraji line: it subsequently built other lines in partnership with other Native States in Kathiawar. There are no export and import dues, the people being free from taxes and dues. Comparatively speaking Gondal stands first in Kathiawar in respect of the spread of education. Compulsory female education in the State has been recently ordered by His Highness. Rs. 13 lakhs has been spent on irrigation tanks and canals and water supply to the town of Gondal. The Capital is Gondal, a fortified town on the line between Rajkot and Jetalsar.

Junagadh State.—This State has an area of 3,336½ square miles and an average revenue of about 50 lakhs and is bounded on the north by the Bardas and Halar and on the west and south by the Arabian Sea. The river Saraswati, famous in the sacred annals of the Hindus, passes through the State. A sparsely wooded tract called the Gir, comprising about 500 square miles, is contained in the State and is well known as the last haunt in India of the lion. Until 1472, when it was conquered by Sultan Mahmud Begra of Ahmedabad, Junagadh was a Rajput State, ruled by Chiefs of the Chudasama tribe. During

the reign of the Emperor Akbar it became a dependency of Delhi, under the immediate authority of the Mughal Viceroy of Gujarat. About 1735, when the representative of the Mughals had lost his authority in Gujarat, Sher Khan Babi, a soldier of fortune, expelled the Mughal Governor, and established his own rule. The ruler of Junagadh first entered into engagements with the British Government in 1807. The Chief bears the title of Nawab, the present Nawab being ninth in succession from the founder of the family. He is His Highness Mahabat Khan, who was born in 1900 and succeeded in 1911. The agricultural products are cotton, shipped in considerable quantities from Veraval to Bombay, wheat and other grains. The coast line is well supplied with fair weather harbours. The State pays a tribute of Rs. 37,210 to the Gaekwar of Baroda and Rs. 28,394 to the British Government, but the Nawab receives contributions, called zortalbi, amounting to Rs. 92,421 from a number of chiefs in Kathiawar—a relic of the days of Mahomedan supremacy. The State maintains 100 Imperial Service Lancers. The Capital is Junagadh, situated under the Girnar and Datar hills, which is one of the most picturesque towns in India, while in antiquity and historical interest it yields to none. The Uparkot, or old citadel, contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. There are a number of fine modern buildings in the town. The famous Asoka Inscription of the Buddhistic time carved out on big bolster of black granite stone is housed at the foot of the Girnar Hill which is sacred to the Jains, the Shivaites, Vaishnavites and other Hindus.

Navanagar State, on the southern shore of the Gulf of Cutch, has an area of 3,791 square miles. The Maharaja of Navanagar is a Jadeja Rajput by caste, and belongs to the same family as the Rao of Cutch. The Jadejas originally entered Kathiawar from Cutch, and dispossessed the ancient family of Jethwas (probably a branch of Jats) then established at Ghumli. The town of Navanagar was founded in 1540. The present Jam Sahib is the well-known cricketer, H. H. Jam Sahib Shri Ranjitsinhji Vibhaji, who was born in 1872 and succeeded in 1907. The principal products are grain and cotton, shipped from the ports of the State. A small pearl fishery lies off the coast. The State pays a tribute of Rs. 1,20,093 per annum jointly to the British Government, the Gaekwar of Baroda and the Nawab of Junagadh. The State maintains a squadron of Imperial Service Lancers. The Capital is Navanagar (or Jamnagar) a flourishing place, nearly 4 miles in circuit, situated 5 miles east of the port of Bedi. Population 349,400. Revenue nearly Rs. 60 lakhs.

Revenue Secretary: Gokulbhai B. Desai.
Political Secretary: Parshuram B. Junnarkar, B.A., LL.B.
General Secretary: Hirabai M. Mehta, B.A. (Cantab.)

Kolaba Agency.—This Agency includes the State of **Janjira** in the Konkan, a country covered with spurs and hill ranges and much intersected by creeks and backwaters. The ruling family is said to be descended from an Abyssinian in the service of one of the Nizam Shahi Kings of Ahmednagar at the end of the fifteenth century. The most noticeable point in its history is the successful resistance that it alone, of all the states of Western India, made against the determined attacks of the Marathas. The British, on succeeding the Marathas as masters of the Konkan, refrained from interfering in the internal administration of the State. The chief is a Sunni Mahomedan; by race a Sidi or Abyssinian, with a title of Nawab. He has a sanad guaranteeing succession according to Mahomedan law and pays no tribute. Till 1868 the State enjoyed singular independence, there being no Political Agent, and no interference whatever in its internal affairs. About that year the maladministration of the chief, especially in matters of police and criminal justice, became flagrant; those branches of administration were in consequence taken out of his hands and vested in a Political Agent. The present ruler is H. H. Nawab Sidi Sir Ahmed Khan, G.C.I.E., who was born in 1862. The heir-apparent is Sidi Muhammad Khan, born on the 7th March 1914. The area of the State is 377 square miles, and the population 98,573. The average revenue is 6 lakhs. The State maintains an irregular military force of 246. The capital is Janjira, 44 miles south of Bombay Island. The Chief exercises full powers in Criminal, Civil and Revenue matters of the State including Jafarabad, a dependency of the Janjira State in Kathiawar. He is entitled to a dynastic salute of 11 guns. In recognition of services rendered in connection with the war his salute was raised on the 1st January 1918 to 13 guns personal and 13 permanent within the limits of his own State from the 1st January 1921.

Kolhapur Agency.—Kolhapur is a State with an area of 3,217 square miles and population of 833,441. Subordinate to Kolhapur are nine feudatories, of which the following five are important: Vishalgarh, Bavda, Kagal (senior), Kapsi and Ichalkaranji. The present ruling chief Col. Sir Shahu Chhatrapati Maharaja, G.C.S.I., G.C.I.E., G.C.V.O., [LL. D., (Camb.)], M.R.A.S., traces his descent from a younger son of Shivaji, founder of the Maratha power. The prevalence of piracy from the Kolhapur port of Malvan compelled the Bombay Government to send expeditions against Kolhapur in 1765, and again in 1792, when the Raja agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Malvan and Kolhapur. Internal dissensions and wars with neighbouring States gradually weakened the power of Kolhapur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain ports, the Kolhapur Raja was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government. The principal articles of production are rice, jawar and sugar-cane and the manufactures are coarse cotton and woollen cloths, pottery and hard-

ware. The State pays no tribute, and supports a military force of 690. The nine feudatory estates are administered by their holders, except in the case of two whose holders are minors. Kolhapur proper is divided into five pethas or talukas and four mahals and is managed by the Maharaja, who has full powers of life and death. The Southern Mahratta Railway passes through the State and is connected with Kolhapur City by a line which is the property of the State.

Resident and Senior Political Agent for Kolhapur and the Southern Mahratta Country—Lt.-Col. J. W. B. Merewether, C.I.E.

Southern Maratha Country States.—The Agency consists of the following eight States:—

Name of State.	Area in square miles.	Population.	Tribute to British Government.	Average revenue.
			Rs.	Rs.
Sangi	1,112	227,146	1,35,000	10,75,756
Miraj (Senior)	339	80,281	12,557	3,12,989
Miraj (Junior)	210	36,400	7,388	2,55,263
Kurundwad (Senior)	185	38,375	....	1,54,369
Kurundwad (Junior)	114	34,084	9,618	1,73,669
Jamkhandi	524	100,304	20,515	9,41,105
Mudhol	368	62,831	2,671	3,52,916
Ramdrug	169	36,610	....	1,50,729
Total ..	3,021	616,121	1,87,749	34,16,787

Mahi Kantha.—This group of States has a total area of 3,124 square miles and a population of 412,631 including that of **Idar** which is 202,811. The revenue is about 14 lakhs. The Agency consists of the first class State of Idar and 51 small States. The Native State of Idar covers more than half the territory. It has an area of 1,669 square miles and an average revenue of Rs.10,01,725; eleven other States are of some importance; and the remainder are estates belonging to Rajput or Koli Thakurs, once the lawless feudatories of Baroda, and still requiring the anxious supervision of the Political Officer. H. H. Major-General Sir Partab Singh, a Rajput of the Rathor Clan, having been appointed regent of the State of Jodhpur, resigned the gadi of Idar in June 1911 and was succeeded by his adopted son Daulatsinhji, who is aged 39. His Highness had been on active service. Many relatives of the Maharaja and feudal chiefs whose ancestors helped to secure the country for the present dynasty, now enjoy large estates on service tenures, and there are numerous petty chiefs or *bhumias* who have held considerable estates from the time of the Raos of Idar, or earlier, and are under no obligation of service. The revenues of the State are shared by the Maharaja with these feudal chiefs. The Maharaja receives Rs. 52,427 annually on account of Khichdi and other Raj Haks from its subordinate Sardars, the tributory Talukas of the Mahi Kantha Agency and others, and pays Rs. 30,340 as tribute to the Gaekwar of Baroda through the British Government. The subordinate Sardars of Idar, known locally as pattawats, hold their estates on condition of military service, the quota being three horsemen for every 1,000 Rupees of revenue; but for many years this service has not been exacted and no military force is maintained at present. The second class States are Polo and Danta. The success of minor Rao Hamirsinghji has been recognised by Government to the Chiefship of the former, while the Ruler of the latter is Maharana Hamirsinghji.

Political Agent—Lt.-Col. W.M.P. Wood, C.I.E.

Nasik Agency.—This consists of one State Surgana, lying in the north-west corner of the Nasik District. Surgana has an area of 360 square miles and a population of 14,838. The ruling chief is Pratapraо Shankarrao Deshmukh, who is descended from a Maratha Pawar family. He rules the State subject to the orders of the Collector of Nasik. The revenue of the State is about Rs. 33,000.

Palanpur Agency.—This group of States in Gujarat comprises two first class States, Palanpur and Radhanpur, and a few minor States and petty talukas. Its total area is 6,393 square miles and the population is 515,092. The gross revenue is about 14½ lakhs. The territory included in the Agency has, like the more central parts of Gujarat, passed during historical times under the sway of the different Rajput dynasties of Anhilvada, the early

Khilji and Tughlak Shahi dynasties of Delhi, the Ahmedabad Sultans, the Mughal Emperors, the Mahrattas, and lastly the British. The State from which the Agency takes its name is under the rule of H. H. Taley Muhammad Khan, who is entitled Nawab and Dewan of Palanpur. He is descended from the Lohanis, an Afghan tribe who appeared in Gujarat in the fourteenth century. The connection of the British Government with the State dates from 1819 in which year the chief was murdered by a body of nobles. Two high roads from Ahmedabad pass through the State and a considerable trade in cotton, cloth, grain, sugar and rice is carried on. The State maintains a constabulary force of 600 and pays tribute of Rs. 38,000 to the Gaekwar of Baroda. The capital is Palanpur, situated at the junction of the Palanpur-Deesa Branch of the B. B. & C. I. Railway. It is a very old settlement of which mention was made in the eighth century.

Political Agent—Lt.-Col. N. S. Coghill.

Radhanpur is a State, with an area of 1,150 square miles, which is held by a branch of the Babi family, who since the reign of Humayun have always been prominent in the annals of Gujarat. The present chief is H. H. Jalalud-din Khanji, the Nawab of Radhanpur. He has powers to try his own subjects even for capital offences without permission from the Political Agent. The State maintains a Police force of 208. The principal products are cotton, wheat and grain. The capital is Radhanpur town, a considerable trade centre for Northern Gujarat and Cutch.

Rewa Kantha Agency.—This Agency, with an area of 4,956 square miles and a population of 665,099, comprises 61 States, of which Rajpipla is a first class State, 5 are second class, one is third class and the rest are either petty States or talukas. Among those petty States are Sanjeli in the north, Bhadarva and Umeta in the west, Narukot in the south-east, and two groups of Mehwas. The 26 Sankheda Mehwas petty estates lie on the right bank of the Narbada, while the 24 Pandu Mehwas petty estates including Dodka, Anghad and Raika, which together form the Dodka Mehwas are situated on the border of the Mahi.

The following are the statistics of area and population for the principal States:—

State.	Area in square miles.	Population.
Balasinor	189	40,563
Baniya	813	115,350
Chhota Udaipur	873	103,639
Lunavada	388	75,998
Narukot (Jambhughoda) ..	143	8,485
Rajpipla	1,517	161,588
Sunth	394	59,350
Other Jurisdictional States, Civil Stations and Thana Circles	639	100,126

Under the first Anhilvada dynasty (746-961), almost all the Rewa Kantha lands except Champaner were under the government of the Bariyas, that is, Koli and Bhil chiefs. In the eleventh, twelfth and thirteenth centuries chiefs of Rajput or part Rajput blood, driven south and east by the pressure of Muhammadan invasions, took the place of the Koli and Bhil leaders. The first of the present States to be established was the house of the Raja of Rajpipla.

Political Agent—J. Abbott, I.C.S.

Rajpipla.—This State lies to the south of the Narbada. It has an area of 1,517¼ square miles. The lands to the south of the Narbada for a few miles are very rich and fertile. Beyond that the Country for the most part is hilly. The family of the Maharaja of Rajpipla, H. H. Maharana Shri Vijayasinjhi is said to derive its origin from a Rajput of the Gohel clan. The State pays an annual sum of Rs. 50,000 on account of Ghasdana to the Gaekwar of Baroda. Cotton is the most important crop in the State. In the hills there are valuable teak forests. The capital is Nandod, which is connected with Anklesvar by railway built by the State.

Satara Jagirs.—Under this heading are grouped the following six States:—

State.	Area in sq. miles.	Population.	Revenue in lakhs.
Aundh	501	68,995	3
Phaltan	397	55,996	2
Bhor	925	144,601	5
Akalkot	498	89,082	4
Jath	884	69,810	2
Daphlapur	96	8,833	2

These were formerly feudatory to the Raja of Satara. In 1849 five of them were placed under the Collector of Satara, and Akalkot under the Collector of Sholapur. Subsequently, the Jagir of Bhor was transferred to the Collector of Poona and Jath and Daphlapur to the Southern

Mahratta country. The last two are now under the Collector of Bijapur. The ruling chiefs are as follows :—

State.	Ruling Chiefs.	Tribute to British Government.
		Rs.
Aundh ..	Bhavanrao Shrinivasrao *alias* Baba Saheb, Pant Pratinidhi.	....
Phaltan ..	Mudhojirav Janrav Nimbalkar	9,600
Bhor ..	H. H. Shankarrav Chimnaji, Pant Sachiv	4,684
Akalkot ..	Fatehsinh Shahai Raje Bhonsle *alias* Bapu Saheb	14,592
Jath ..	Ramrav Amritrav *alias* Aba Saheb Daphle	6,400
Daphlapur ..	Rani Bai Saheb Daphle, widow of Ramchandrarav Venkatrav Chavan Daphle.	....

Savantwadi.—This State has an area of 925 square miles and population of 266,486. The average revenue is 5½ lakhs. It lies to the north of the Portuguese territory of Goa, the general aspect of the country being extremely picturesque. Early inscriptions take the history of the State back to the sixth century. So late as the nineteenth century the ports on this coast swarmed with pirates and the country was very much disturbed. The present chief is Khem Savant V, *alias* Bapu Saheb Bhonsle. Rice is the principal crop of the State, and it is rich in valuable teak. The sturdy Marathas of the State are favourite troops for the Indian Army and supply much of the immigrant labour in the adjacent British districts. The Capital is Savantvadi, also called Sundar Vadi, or simply Vadi.

Sholapur Agency.—This contains the State of Akalkot which forms part of the tableland of the Deccan. It has an area of 498 square miles and a population of 81,250. In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Mussulman kingdom of Ahmednagar was granted by the Raja of Satara to a Maratha Sardar, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849 after the annexation of Satara, the Akalkot Chief became a feudatory of the British Government.

Baria.—The State has an area of 813 square miles with a population of 137,289 and is situated in the heart of the Panchmahals district. The Capital Devgad Baria is reached by road from Piplod station on the B. B. & C. I. Railway, at a distance of eight miles. The average revenue of the State is about 8 lakhs. The State enjoys plenary powers and pays no tribute to the British Government or any other State. The Ruler Captain His Highness Maharaol Shree Ranjitsinhji enjoys a salute of eleven guns. He served in France and Flanders in the war and in the Afghan War, 1919. The staple crop is maize. The forests are rich in teak, wood and all sorts of jungle produce. There is a flourishing glass industry within the State. There is a large scope for forest industries.

The Sukkur Agency.—This consists of the Khairpur State, a great alluvial plain in Sind. It has an area of 6,050 square miles and a population of 223,788, and revenue of over 20 lakhs, 59 thousands. The present chief, H. H. Mir Sir Imam Buksh Khan Talpur, G.C.I.E., belongs to a Baloch family called Talpur. Previous to the accession of this family on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of Sind. In that year Mir Fateh Ali Khan Talpur established himself as Rais or ruler of Sind ; and subsequently his nephew, Mir Sohrab Khan Talpur, founded the Khairpur branch of the Talpur family. In 1832 the individuality of the Khairpur State, as separate from the other Talpur Mirs in Sind, was recognised by the British Government in a treaty, under which the use of the river Indus and the roads of Sind were secured to the British. The chief products of the State are oil-seeds, ghee, hides, tobacco, fuller's earth, carbonate of soda, cotton, wool and grain. The manufactures comprise cotton fabrics and various kinds of silverware and metal work. There is an industrial school at the capital where lacquer work, carpets, pottery, etc., are produced. The Railway from Hyderabad to Rohri runs through the whole length of the State. The rule of the Mir is patriarchal, but many changes have been made in recent years introducing greater regularity of procedure into the administration. The Wazir, an officer sent from British service, conducts the administration under the Mir. The State supports a military force of 504 including an Imperial Service Camel and Baggage Corps which is 139 strong and served at the Front.

Political Agent: The Collector of Sukkur.

Surat Agency.—This is a small group of three second class States under the superintendence of the Collector of Surat.

State.	Ruling Chiefs.	Area in sq. miles.	Population.
Dharampur ..	Maharana Shri Mohandevji Narandevji	704	114,995
Bansda ..	Maharaval Shri Indrasinhji Pratapsinhji	215	44,594
Sachin ..	His Highness Nawab Sidi Ibrahim Muhammad Yakut Khan Mubazarat Daula Nasrat Jung Bahadur.	49	18,903

The joint revenue of these States is 16¼ lakhs. Tribute is paid to the British Government of Rs. 9,154. There is also attached to this Agency a tract of country known as the Dangs, which has an area of 999 square miles and a population of 29,353 and a revenue of Rs. 30,000. The country is divided into 14 Dangs or States of very unequal area, each under the purely nominal rule of a Bhil Chief with the title of Raja, Naik, Pradhan or Povar.

Thana Agency.—This includes the State of Jawhar, in the Thana District, on a plateau above the Konkan plain. It has an area of 310 square miles and a population of 49,693 and revenue of 3¾ lakhs. Up to 1294, the period of the first Mahomedan invasion of the Deccan, Jawhar was held by a Varli, not a Koli chief. The first Koli chief, obtained his footing in Jawhar by a device similar to that of Dido, when she asked for and received as much land as the hide of a bull would cover. The Koli chief cut a hide into strips, and thus enclosed the territory of the State. The present chief is Raja Vikramshah Patangshah, who administers the State, assisted by a Karbhari under the supervision of the Collector of Thana, who is Political Agent of the State.

UNDER THE GOVERNMENT OF BENGAL.

Cooch Behar.—This State, which at one time comprised almost the whole of the Northern Bengal, Assam and a part of Bhutan now known as the Duars, is a low-lying plain in North Bengal. It has an area of 1,307 square miles, a population of 592,472 and a revenue of nearly 33 lakhs. The ruling chief is H. H. Maharaja Sir Jitendra Narayan Bhup-Bahadur K.C.S.I., who married Rani Indira Debi, eldest daughter of H.H. Maharaja Sayaji Rao Gaekwar of Baroda in 1913 and succeeded his brother Maharaja Raj Rajendra Narayan in the same year. The eldest Maharaj Kumari was born to His Highness in October 1914 and a son and the Yuvaraj Kumar in December 1915. Since then one Maharaj Kumar and two Maharaj Kumaris have been born to their Highnesses. His Highness the Maharaja and his family belong to the Kshatriya Varna of Kshatriya origin. H. H. administers the State with the assistance of the State Council of which he is President. Cooch Behar once formed part of the famous kingdom of Kamup. British connection with it began in 1772 when owing to inroads of the Bhuteas, the assistance of the East India Company was invoked. The chief products of the State are rice, jute, mustard seed and tobacco. The capital is Cooch Behar, which is reached by the Cooch Behar State Railway, a branch from the Eastern Bengal State Railway System.

Hill Tippera.—This State lies to the east of the district of Tippera and consists largely of hills covered with dense jungles. It has an area of 4,116 square miles and a population of 303,801. The revenue from the State is about 12 lakhs and from the Zemindari in British territory a slightly smaller sum. The present ruler is Maharaja Birendra Kishore Deb Barman Manikya Bahadur, who is a Kshatriya by caste and comes of the Lunar race and is entitled to a salute of 13 guns. The military prestige of the Tripura Rajas dates back to the fifteenth century and a mythical account of the State takes the history to an even earlier date. Both as regards its constitution and its relations with the British Government, the State differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Tripura, the Maharaja also holds a large landed property situated in the plains of the Districts of Tripura, Naokhali and Sylhet. This estate covers an area of 600 square miles, and is held to form with the State an indivisible Raj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Raj producing in times gone by disturbances and domestic wars, and exposing the inhabitants to serious disorders and attacks from the Kukis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a *sanad* which was drawn up in 1904. The chief products of the State are rice, cotton, *til*, tea and forest produce of various kinds, the traffic being carried chiefly by water. The administration is conducted by the Minister at Agartala, the capital, assisted by several assistants

Political Agent: D. H. Wares, I.C.S., *(ex-officio)*.

UNDER THE GOVERNMENT OF BIHAR AND ORISSA.

Under this Government there are the Chota Nagpur political States of Kharsawan and Seraikela, and the Orissa feudatory States, 24 in number. The total area is 28,656 square miles, and the total population 3,942,972. The revenue is about 70 lakhs. The inhabitants are hill-men of Kolarian or Dravidian origin, and their condition is still very primitive. The chief of **Kharsawan** belongs to a junior branch of the Porahat Raja's family. The State first came under the notice of the British in 1793, when, in consequences of disturbances on the frontier of the old Jungle Mahals, the Thakur of Kharsawan and the Kunwar of Saraikela were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present sanad was granted in 1920. He exercises all administrative powers, executive and judicial, subject to the control of the Personal Assistant, Orissa Feudatory States (Deputy Commissioner of Singhbhum) and the Commissioner of Chota Nagpur. The Bengal Nagpur Railway runs through a part of the State. The adjoining State of Seraikela is held by the elder branch of the Porahat Raja's family.

Orissa Feudatory States.—This group of 24 dependent territories is situated between

the Mahanadi Delta and the Central Provinces, and forms the mountainous background of Orissa. The names of the individual States are Athgarh, Talcher, Mayurbhanj, Nilgiri, Keonjhar, Pal Lahara, Dhenkanal, Athmallik, Hindol, Narsinghpur, Baramba, Tigiria, Khanpara, Nayagarh, Ranpur, Daspalla and Baud. To these there were added in 1905 the following States: Bamra, Rairakhol, Sonpur, Patna and Kalahandi from the Central Provinces, and Gangpur and Bonai from the Chota Nagpur States. The total population is 3,961,805 with a revenue of Rs. 80,61,760. The Feudatory States have no connected or authentic history. Comprising the western and hilly portion of the province of Orissa they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rajputs from the north, come to Puri on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayurbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspalla are said to be descended from the same stock; and a Rajput origin is also claimed by the Rajas of Athmallik, Narsinghpur, Pal Lahara, Talcher and Tigiria. Nayagarh, it is alleged, was founded by a Rajput from Rewah, and a scion of the same family was the ancestor of the present house of Khandpara. On the other hand, the chiefs of a few States, such as Athgarh, Baramba and Dhenkanal, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs covering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the paramount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors; the Mughals and Marathas, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest. The British conquest of Orissa from the Marathas, which took place in 1803, was immediately followed by the submission of ten of the Tributary States the chiefs of which were the first to enter into treaty engagements.

The States have formed the subject of frequent legislation of a special character. They were taken over from the Marathas in 1803 with the rest of Orissa; but, as they had always been tributary states rather than regular districts of the native governments they were exempted from the operation of the general regulation system. This was on the ground of expediency only and it was held that there was nothing in the nature of British relations with the proprietors that would preclude their being brought under the ordinary jurisdiction of the British courts, if that should ever be found advisable. In 1882 it was held that the States did not form part of British India and this was afterwards accepted by the Secretary of State.

The staple crop in these States is rice. The forests in them were at one time among the best timber producing tracts in India, but until lately forest conservancy was practically unknown. The States have formed the subject of frequent legislation of a special character. The relations with the British Government are governed mainly by the sanads granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties and obligations of the chiefs; providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Political Agent.

Political Agent: H. W. P. Scroope.

UNDER THE GOVERNMENT OF THE UNITED PROVINCES.

Three States: Rampur, Tehri and Benares are included under this Government:—

State.	Area Sq. Miles.	Population.	Revenue in lakhs.
Rampur ..	892	531,898	45
Tehri (Garhwal)	4,200	299,853	6
Benares ..	988	....	....

Rampur is a fertile level tract of country. The ruler Colonel His Highness Alijah Farzandi-Dilpizir-i-Daulat-i-Inglishia, Mukhlis-ud-Daulah, Nasir-ul-Mulk, Amir-ul-Umra, Nawab Sir Syed Mohammed Hamid Ali Khan Bahadur Mustaid Jung, G.C.S.I. G.C.I.E., G.C.V.O., A.D.C., to His Imperial Majesty the King Emperor. Born 31st August 1875, descended from the famous Sadats of Bahera. Succeeded in February 1889. His Highness is the sole surviving representative of the once great Rohilla power in India. He is the Premier Chief in the United Provinces, and rules over a territory of 892 square miles with a population of 531,217. His Highness is an enlightened Prince and is well educated in Arabic, Persian and English languages. He is a keen supporter of education for Mohammedans, and has travelled extensively in America and Europe. During the Mutiny of 1857 the then Nawab of Rampur displayed his unswerving loyalty to the British Government by affording pecuniary aid, protecting the lives of Europeans, and rendering

other valuable services which were suitably recognised by the Paramount Power. This State contributes towards the defence of the Indian Empire by maintaining a well-equipped and well trained battalion of Imperial Service Infantry and a cavalry unit consisting of two squadrons.

During the great War the Rampur I. S. Infantry was sent to East Africa where it rendered valuable services to the Imperial cause and returned to Rampur after a stay of about four years. A detachment of Imperial Service Lancers trained Government Horses at the Remount Depots of Bellary and Aurangabad while another escorted Government horses to Europe. During the Afghan War the two Regiments were sent on garrison duty in British India.

His Highness has three sons, the eldest Nawab Syed Raza Ali Khan Bahadur being the heir-apparent.

The State has an income of over fifty lakhs of rupees a year.

His Highness enjoys a permanent salute of 15 guns.

Tehri State (or Tehri Garhwal).—This State lies entirely in the Himalayas and contains a tangled series of ridges and spurs radiating from a lofty series of peaks on the border of Tibet. The sources of the Ganges and the Jumna are in it. The early history of the State is that of Garhwal District, the two tracts having formerly been ruled by the same dynasty. Parduman Shah, the last Raja of the whole territory, was killed in battle, fighting against the Gurkhas; but at the close of the Nepalese War in 1815. his son received from the British the present State of Tehri. During the Mutiny the latter rendered valuable assistance to Government. He died in 1859 without issue, and was succeeded by his near relative Bhawani Shah; and he subsequently received a *sanad* giving him the right of adoption. The present Raja is Captain H. H. Narendra Shah. The principal product is rice, grown on terraces on the hill sides. The State forests are very valuable and there is considerable export of timber. The Raja has full powers within the State. A unit of Imperial Service Sappers is maintained. The capital is Tehri, the summer capital being Pratapnagar, 8,000 feet above the sea-level.

Political Agent: The Commissioner of Kumaon.

Benares.—The founder of the ruling family of Benares was one Mansa Ram, who entered the service of the Governor of Benares under the Nawab of Oudh in the early eighteenth century His son, Balvant Singh, conquered the neighbouring countries and created a big state out of them over which he ruled till 1770. Raja Chet Singh succeeded him, but was expelled by Warren Hastings in 1781. In 1794, owing to the mal-administration of the estates which had accumulated under the Raja of Benares, an agreement was concluded by which the lands held by the Raja in his own right were separated from the rest of the province, of which he was simply administrator. The direct control of the latter was assumed by the Government, and an annual income of one lakh of rupees was assured to the Raja, while the former constituted the Domains. Within the Domains the Raja had revenue powers similar to those of a Collector in a British District, which were delegated to certain of his own officials. There was thus constituted what for over a century was known as the Family Domains of the Maharaja of Benares. On the 1st of April 1911 these Domains became a State consisting of the parganas of Bhadohi (or Konrh) and Chakia (or Kera Mangraur) with the town of Ramnagar and its neighbouring villages. The Maharaja's powers are those of a ruling chief, subject to certain conditions, of which the most important are the maintenance of all rights acquired under laws in force prior to the transfer, the reservation to Government of the control of the postal and telegraph systems, of plenary criminal jurisdiction within the State over servants of the British Government and European British subjects, and of a right of control in certain matters connected with excise. The present ruler is Lieut. Colonel H. H. Maharaja Sir Prabhu Narayan Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1855 and succeeded to the State in 1889. He is entitled to a salute of 15 guns and is a Hon. Lt.-Colonel in the Indian Army.

UNDER THE GOVERNMENT OF THE PUNJAB.

Under this Government there are 34 states, varying considerably in size and importance. Area, 36,532 square miles. Population (1911), 4,212,794. Revenue, about £1,000,000.

The Punjab states may be grouped under three main classes. The hill States, 23 in number, lie among the Punjab Himalayas and are held by some of the most ancient Rajput families in all India. Along the western half of the southern border lies the Muhammadan state of Bahawalpur. The remaining States, including the Sikh principalities of Patiala, Jind, Nabha, Kapurthala, Faridkot and Kalsia, and the Muhammadan chiefships of Maler Kotla, Pataudi, Loharu and Dujana, lie east of Lahore, and, with insignificant exceptions, occupy the centre of the eastern plains of the province.

The list below gives details of the area, population, and revenue of the more important states:—

Name.	Area square miles.	Population.	Revenue Approx. in lakhs.
Bahawalpur ..	15,000	780,394	27
Chamba ..	3,216	134,351	7
Faridkot ..	642	130,374	8
Jind ..	1,259	271,728	15
Kapurthala ..	630	268,244	25
Maler Kotla ..	167	71,144	14½
Mandi ..	1,200	181,110	5
Nabha ..	928	248,892	15
Patiala ..	5,412	1,407,659	72
Sirmur (Nahan)..	1,198	138,564	8

Bahawalpur.—This State, which is about 300 miles in length and about 40 miles wide, is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert; the central tract is chiefly desert, not capable of cultivation, identical with the Bar or Pat uplands of the Western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The ruling family claims descent from the Abbaside Khalifas of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrani empire. On the rise of Ranjit Singh, the Nawab made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjit Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahawalpur was negotiated in 1833, the year after the treaty with Ranjit Singh for regulating traffic on the Indus. It secured the independence of the Nawab within his own territories, and opened up the traffic on the Indus and Sutlej. During the first Afghan War the Nawab rendered assistance to the British and was rewarded by a grant of territory and life pension. On his death the succession was disputed and for a time the State was in the hands of the British. The present Nawab is H. H. Nawab Sadiq Muhammad Khan, who was born in 1904 and succeeded in 1907 During his minority the State is managed by a Council of Regency. The chief crops are wheat, rice and millet. The Lahore-Karachi branch of the North-Western State Railway passes through the State. The State supports an Imperial Service Silladar Camel Transport Corps consisting of 372 men and 966 camels and a Mounted Escort consisting of 299 men and 166 camels, in addition to other troops. The capital is Bahawalpur, a walled town built in 1748.

Political Agent: Lt.-Col. A. J. O'Brien, C.I.E., C.B.E.

Chamba.—This State is enclosed on the west and north by Kashmir, on the east and south by the British districts of Kangra and Gurdaspur, and it is shut in on almost every side by lofty hill ranges. The whole country is mountainous and is a favourite resort of sportsmen. It possesses a remarkable series of copper plate inscriptions from which its chronicles have been completed.

Founded probably in the sixth century by Marut, a Surajbansi Rajput, who built Brahmapura, the modern Barmaur, Chamba was extended by Meru Varma (680) and the town of Chamba built by Sahil Varma about 920. The State maintained its independence, until the Moghal conquest of India.

Under the Moghals it became tributary to the empire, but its internal administration was not interfered with, and it escaped almost unscathed from Sikh aggression. The State first came under British influence in 1846. The part, west of the Ravi, was at first handed over to Kashmir, but subsequently the boundaries of the State were fixed as they now tand, and it was declared independent of Kashmir. The present chief is H. H. Raja Ram Singh, who was born in 1891, and succeeded in 1919. The principal crops are rice, maize and millets. There are some valuable forests which were partly leased to Government in 1864 for a term of 99 years, but the management of them has now been retroceded to the Chamba Durbar. The mountain ranges are rich in minerals which are little worked. The principal road to Chamba town is from Pathankot, the terminus of the Amritsar Pathankot branch of the North-Western Railway. Chamba town, on the right bank of the Ravi, contains a number of interesting temples, of which that of Lakshmi Narayan, dating possibly from the tenth century, is the most famous.

Faridkot.—The ruling family of this sandy level tract of land belongs to the Sidhu-Barar clan of the Jats, and is descended from the same stock as the Phulkian houses. Their occupation of Faridkot and Kot Kapura dates from the time of Akbar, though quarrels with the surrounding Sikh States and internal dissensions have greatly reduced the patrimony.

The present chief, Farzand-i-Saadat Nishan Hazarat-i-Kaisar-i-Hind Brar Bans Raja Har Indar Singh Bahadur was born in 1915 and succeeded his father in 1919. Under the orders of the Government of India the administration of the State has been entrusted to a Council of Administration consisting of a President and three members. The State has an area of 643 square miles with a population of 150,661 and has an annual income of 15 lakhs. The Ruler is entitled to a salute of 11 guns, and a visit and return visit from the Viceroy. The State possesses a company of Imperial Service Sappers.

Jind.—The three Native States of Jind, Patiala and Nabha form collectively the Phulkian States, the most important of the Cis-Sutlej States. This area is the ancestral possession of the Phulkian houses. It lies mainly in the great natural tract called the Jangal (desert or forest), but stretches north-east into that known as the Pawadh and southwards across the Ghaggar into the Nardak, while its southernmost tract, round the ancient town of Jind, claims to lie within the sacred limits of Kurukshetra. This vast tract is not, however, the exclusive property of the States; for in it lie several islands of British territory, and the State of Maler Kotla enters the centre of its northern border. On the other hand the States hold many outlying villages surrounded by British territory.

The history of Jind as a separate State dates from 1763 when the confederated Sikhs captured Sirhind town and partitioned the whole Jind Province. The Maharaja of Jind, H. H. Maharaja Sir Ranbir Singh, G.C.I.E., K.C.S.I., was born in 1879 and succeeded in 1887. He is descended from the ancestors of the Phulkian family. During the Sikh War and the Mutiny the Ruler of Jind was of great service to the British and was rewarded with a grant of nearly 600 square miles of land. The principal crops are wheat, barley and gram. The only industries of importance are the manufactures of gold and silver ornaments, leather and woodwork and cotton cloth. The capital is Sangrur which is connected by a State Railway with the North-Western Railway. Under His Highness' Court there is a Ministerial Council which controls all the departments of the State.

Kapurthala.—This State consists of three detached pieces of territory in the great plain of the Jullundur Doab. The ancestors of the ruler of Kapurthala at one time held possessions both in the Cis and Trans-Sutlej and also in the Bari Doab. In the latter lies the village of Ahlu, whence the family springs, and from which it takes the name of Ahluwalia. When the Jullundur Doab came under the dominion of the British Government in 1846, the estates north of the Sutlej were maintained in the independent possession of the Ahluwalia Raja, conditional on his paying a commutation in cash for the service engagements by which he had previously been bound to Ranjit Singh. The Bari Doab estates are held by the head of the house as a Jaghir in perpetuity, the civil and police jurisdiction remaining in the hands of the British authorities. For good services during the Mutiny, the present Maharaja's grandfather was rewarded with a grant of other States in Oudh. The present Ruler is H. H. Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1872 and succeeded in 1877. He was granted the title of Maharaja as an hereditary distinction in 1911. The rulers of Kapurthala are Sikhs and claim descent from Rana Kapur, a member of the Rajput House of Jaisalmer. Only a small proportion of the population however are Sikhs, the majority being Mahomedans. The chief crops are wheat, gram, maize, cotton and sugarcane. The town of Sultanpur in this State is famous for hand-painted cloths. The main line of the North-Western Railway passes through part of the State and the Grand Trunk Road runs parallel to it. A branch railway from Jullundur City to Ferozepur passes through the State. Kapurthala maintains a battalion of Imperial Service troops and a small force of local troops. The capital is Kapurthala.

Agent to the Lieutenant-Governor for Kapurthala, the Commissioner of the Jullundur Division.

Maler Kotla.—This State consists of a level sandy plain bounded by the district of Ludhiana on the north and by Patiala territory elsewhere. The Nawabs of Maler Kotla are of Afghan descent, and originally held positions of trust in the Sirhind province under the Moghal Emperors. As the Empire sank into decay during the eighteenth century, the local chiefs gradually became independent. The result was constant feuds with the adjacent Sikh States. After the victory of Laswari, gained by the British over Sindhia in 1803, and the subjugation and flight of Holkar in 1805, when the Nawab of Maler Kotla joined the British army, the British Government succeeded to the power of the Marathas in the districts between the Sutlej and the Jumna. The final treaty which affirmed the dependence of the State on the British Government was signed after the submission of Ranjit Singh in 1809. The present Nawab is H. H. Nawab Ahmud Ali Khan Bahadur, K.C.S.I., who was born in 1881 and succeeded in 1908. He was created Hon. Major in the Indian Army for his services during the war. The chief products are cotton, sugar and opium. The State supports two double companies of Imperial Service Sappers. The capital is Maler Kotla. Revenue 14½ lakhs.

Mandi.—This is a mountainous State in the upper reaches of the Beas. It has a history of considerable length, as it once formed part of the Suket State. Its relations with the British were determined after the battle of Sobraon in 1846. The present minor Chief H. H. Raja Jogindra Sen was installed in 1913. The administration is carried on by Pandit Maharaj Kishan, M.B.E., the Superintendent, and Pandit Lala Sri Gopal, Assistant Superintendent. The principal crops are rice, maize, wheat and millet. About three-fifths of the State are occupied by forest and grazing lands. It is rich in minerals. The capital is Mandi, founded in 1527, which contains several temples and other buildings of interest and is one of the chief marts for commerce with Ladakh and Yarkhand.

Nabha.—Nabha which became a separate State in 1763 is one of the 3 Phulkian States—Nabha, Patiala and Jind, and though second in point of population and revenue of the 3 sister States, it claims seniority being descended from the eldest branch. It consists of two distinct parts, the main portion comprising 12 separate pieces of territory scattered among the other Punjab States and Districts, forms the City of Nabha and the *Nizamats* of Phul and Amloh; the second portion forms the *Nizamat* of Bawal in the extreme south-east of the Punjab on the border of Rajputana; this Nizamat of Bawal was subsequently added to its territory as a reward from the British Government for the loyalty of the Rulers of Nabha. The State now covers an area of about 1,000 square miles and has a population of about 3 lakhs. The present Ruler is Shri Maharaja Ripudaman Singhji Malavendra Bahadur, who was born in 1883 and succeeded his father in 1911. The administration of the State is carried on by His Highness the Maharaja assisted by a Council of Ministers. The High Court is the head of the Judicial Department. The State supports one battalion of Imperial Service Infantry consisting of 600 men; besides this there are local forces of infantry, cavalry and artillery, etc., consisting of about 1,000 men all told and also a Transport Corps. For the preservation of the peace there is a Police force consisting of about 600 men.

The State is traversed by the main and 3 branch lines of the N.-W. Railway and the Rajputana Malwa Railway crosses the *Nizamat* of Bawal. A large portion of the State is irrigated by the Sirhind Canal. The crops of the State are gram, pulses, bajra, sugarcane, cotton, wheat and barley; to facilitate trade the Darbar has opened grain markets and Banks near the principal railway stations within the State territory. The chief industries of the State consist of the manufacture of silver and gold ornaments, brass utensils, and cotton carpets, lace and *gota*, etc. There are some ginning factories and a cotton steam press in the State which are working successfully. The State has so far contributed roughly about 45 lakhs of rupees to the various funds and loans in connection with the War, including a fully equipped Hospital Ship for Mesopotamia, people of the State have subscribed about 13 akhs to the Indian War Loans.

Patiala.—This is the largest of the Phulkian States, and the premier State in the Punjab.

Its territory is scattered and interspersed with small estates and even single villages belonging to other States and British districts. It also comprises a portion of the Simla Hills and territory on the border of Jaipur and Alwar States. Area 5,932 square miles. Population 1,499,739. Gross income Rs. one crore and thirty five lakhs. Its history as a separate state begins in 1762. Thd present Ruler, Major-General His Highness Farzand-i-Khas Daulat-i-Inglishia Mansur-ul-Zaman Amir-ul-Umra Maharaja Dhiraj Rajeshwar Sri Maharaja-i-Rajgan Sir Bhupindra Sing Mohinder Bahadur, G.C.S.I., G.C.I.E., G.B.E., was born in 1891 and succeeded 1900, and assumed the reins of Government in 1909 on attaining majority His Highness the Maharaja Dhiraj enjoys at present personal salute of 19 guns and he and his successors the distinction of exemption from presenting Nazar to the Viceroy in Durbar in perpetuity. The principal crops are grain, barley, wheat, sugar-cane, rapeseed, cotton and tobacco. A great part of the State is irrigated by the Sirhind and Western Jumna Canal distributarics. It possesses valuable forests. The State is rich in antiquities, especially at Pinjaur, Sunam, Sirhind, Bhatinda, Narnaul, etc. Besides possessing a Railway line of its own, known as Rajpura-Bhatinda Railway of 108 miles in length, the North-Western Railway, the E. I. Railway, the B. B.& C. I. Railway and the J. B. Railway traverse the State. His Highness maintains an Imperial Service contingent of a regiment of cavalry and two battalions of infantry. In addition to this the State Regular Forces consist of one battery of Horse Artillery, one regiment of Cavalry and two battalions of Infantry.

Since the State has entered into alliance with the British Government in 1809, it has rendered help to the British Government on all occasions such as Gurkha War, Sikh War, Mutiny of 1857, Afghan War of 1878-79, Tirah and N. W. F. campaign of 1897.

On the outbreak of the European War His Highness placed the entire resources of his State at the disposal of His Majesty the King Emperor and offered his personal services. The entire Imperial Service Contingent was on active service throughout the period of the War and served on various fronts in Egypt, Gallipoli, Mesopotamia and Palestine, winning numerous distinctions. Two mule and one camel corps were raised and placed at the service of the British Government for the period of the War, and in addition to furnishing nearly 28,000 recruits for the British Indian Army and maintaining the State Imperial Service Contingent at full strength, contributed substantially in money and material.

His Highnes was selected by His Excellency the Viceroy to represent the Ruling Princes of India at the Imperial War Conference and Imperial War Cabinet in June 1918 and during his stay in Europe His Highness paid visits to all the different and principal fronts in Belgium, France, Italy and Egypt (Palestine) and received the following decorations from the allied Sovereigns and Governments:—(*a*) Grand Cross of the Order of Leopold, Belgium, (*b*) Legion of Honour, France and (*c*) Grand Cross of the Order of the Crown of Italy and (*d*) Grand Cordon of the Order of the Nile.

Again in 1919 on the outbreak of hostilities with Afghanistan His Highness served personally on the frontier on the Staff of the General Officer Commanding, and the Imperial Service Contingent was on active service towards Kohat and Quetta fronts.

Sirmur (Nahan).—This is a hilly State in the Himalayas under the Political control of the Commissioner of Ambala Division. It history is said to date from the 11th century. In the eighteenth century the State was able to repulse the Gurkha invasion, but the Gurkhas were invited to aid in the suppression of an internal revolt in the State and they in turn had to be evicted by the British. In 1857 the Raja rendered valuable services to the British, and during the second Afghan War he sent a contingent to the North-West Frontier. The present Chief is Lieut.-Colonel H. H. Maharaja Sir Amar Prakash Bahadur, K.C.S.I., K.C.I.E., who was born in 1888 and succeeded in 1911. The main agricultural feature of the State is the recent development of the Kiarda Dun, a fertile level plain which produces wheat, gram, rice, maize and other crops. The State forests are valuable and there is an iron foundry at Nahan which was started in 1867 but, being unable to compete with the imported iron, is now used for the manufacture of sugar-cane crushing mills. The State supports an Imperial Service Corps of Sappers and Miners which served in the Great War. It was captured with General Townshend's force at Kut-al-Amara but the Corps has since been reconstituted and has again gone on service.

UNDER THE GOVERNMENT OF BURMA.

Under this Government there are four Shan States, two in the Mandalay Division (Hkmati Long and Mong Mit); and two in the Sagaing Division (Hsawnghsup and Singkaling Hkmati), the area of which is 7,374 square miles and the population about 67,051, consisting chiefly of Buddhists. There are in addition 48 petty States, 5 in the Northern Shan States. 43 in the Southern Shan States, with an area of 58,835 square miles and a population of 1,358,498 consisting of Buddhists and Animists.

The Shan States—Though a portion of British India, do not form part of Burma proper and are not comprised in the regularly administered area of the Province. They lie for the most part to the east of Upper Burma. They owed allegiance to the Burmese Government, but were administered by their own rulers (Sawbwas) and the British Government has continued to a certain extent the semi-independence which it found existing in 1885. As at present defined, the Shan States are divided into—

1. States under the supervision of the Superintendent, Northern Shan States, whose headquarters are at Lashio; area 16,594 square miles and population 480,390.

2. States under the supervision of the Superintendent and Political Officer, Southern Shan States, whose headquarters are at Taunggyi; area 36,154 square miles and population 836,574.

There are five States in the Northern and 37 in the Southern Shan States. There are in addition two Shan States under the supervision of the Commissioner of the Mandalay Division, namely, Hkmati Long north of the Myitkyina District and Mong Mit lying northeast of the Ruby Mines District. In the northwest of the Upper Chindwin District towards Manipur there are two small Shan States, Hsawnghsup and Singkaling Hkmati, whose administration is supervised by the Commissioner of the Sagaing Division.

The Northern Shan States are North Hsenwi in the north, South Hsenwi near the Salween in the east, Manglon in the south-east, Hsipaw in the south-west, and Tawngpeng in the northwest. The Wa States east of the Salween can hardly be said to be under British control. In ordinary matters the States are administered by their Sawbwas, who are assisted by amats, or ministers, in various departments. The Superintendent exercises general control over the jurisdiction of justice and is vested with wide revisionary powers. In revenue matters the Sawbwas administer their States in accordance with local customs which have been but little modified. Of prime importance in the economy of the country is the Mandalay Lashio railway, 180 miles in length, of which 126 miles lie within the Northern Shan States The line is a single track, and was constructed in the face of considerable engineering difficulties, of which not the least notable was the Gokteik gorge, now spanned by a viaduct. It had been proposed to continue the railway about 90 miles farther east to the Kunlong, where is a ferry over the Salween, and eventually to penetrate into Yunnan; but this extension is for the present in abeyance.

The most important of the Southern Shan States are Kengtung and Yawnghwe. Under the supervision of the Superintendent and Political Officer and his Assistants, the chiefs —known as Sawbwas, Myozas, and Ngwegunhmus—control their own States, exercising revenue, civil and criminal jurisdiction therein. There are in all 10 Sawbwas, 18 Myozas and 9 Ngwegunhmus.

Karenni.—This district consists of five States, with a total area of approximately 4,280 square miles and a population of 63,628, lying on the frontier south of the Shan States. The largest State is Kantarawadi with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about 1¼ lakhs of rupees. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters.

UNDER THE GOVERNMENT OF ASSAM.

The only State of importance under the Chief Commissioner of Assam is **Manipur**, which has an area of 8,456 square miles and a population of 346,222, of which about 60 per cent. are Hindus, and 36 per cent. animistic forest tribes. Manipur consists of a great tract of hilly country and a valley, about 30 miles long 20 miles wide, which is shut in on every side. The State adopted Hinduism in the early eighteenth century, when it came under a Naga Raja, who subsequently made several invasions into Burma. On the Burmese retaliating, Manipur negotiated a treaty of alliance with the British, in 1762. The Burmese again invaded Manipur during the first Burmese War and on the conclusion of peace, in 1826, Manipur was declared independent. The chief event in its subsequent history was the intervention of the British in 1891 to establish the claim of Kula Chandra Singh as Maharaja, followed by the treacherous murder of the Chief Commissioner, Mr. Quinton and the officers with him and the withdrawal of the escort which accompanied him. From 1891 to 1908 the State was administered by a Political Agent and Superintendent of the State during the minority of H. H. Raja Chura Chand Singh, The Raja was invested with ruling powers in 1908. The administration of the State is now conducted by the Durbar, consisting of the Raja as President a vice-president, a member of the Indian Civil Service whose services are lent to the State, three ordinary and three additional members who are all Manipuris. The staple crop of the country is rice. Forests of great variety cover the whole of the hill ranges.

Khasi and Jaintia Hills.—These petty chiefships, 25 in number, with a total area of about 3,900 square miles and a population of 136,000, are included under the Government of Assam. Most of the States have treaties or engagements with the British Government. The largest of them is Khyrim, the smallest is Nonglewai, which has a population of 246. Most of them are ruled by a chief or Siem. The Siemship usually remains in one family, but the succession was originally controlled by a small electoral body constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khasi State has always been of a very democratic character, a Siem exercising but little control over his people. Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khasis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small.

UNDER THE GOVERNMENT OF THE CENTRAL PROVINCES.

The Central Provinces include fifteen feudatory States subordinate to the administration, with an area of 31,174 square miles and a population of 2,117,002. One of the States, Makrai, lies within Hoshangabad District; the remainder are situated in the Chhattisgarh Division, to the different districts of which they were formerly attached. Their relations with Government are controlled by a Political Agent. The States vary greatly in size and importance. Sakti, the smallest, having an area of 138 square miles and Bastar the largest an area of 13,062 square miles. They are administered by hereditary chiefs, who hold on conditions of loyalty and good government set forth in patents and acknowledgments of fealty, but are nominally free from direct interference save in the case of sentences of death, which require the Chief Commissioner's confirmation. But, as a fact, the Government has exercised a very large amount of control, owing mainly to the frequency with which the States have been taken under direct management, because of either the minority or the misconduct of the chief.

The States pay a tribute to Government which amounts in the aggregate to about 2½ lakhs.

Statistics relating to the chief States are contained in the following table:—

State	Area.	Population 1911.	Revenue (approximate) in Lakhs.
	Sq. Miles.		
Bastar ..	13,062	433,310	3
Jashpur ..	1,963	174,458	1
Kanker ..	1,429	127,014	2
Khairagarh ..	931	155,471	3
Nandgaon ..	871	167,362	4
Raigarh ..	1,486	218,860	2
Surguja ..	6,055	248,703	2
Eight other States.	5,377	411,824	6
Total ..	31,174	2,117,002	23

Bastar.—This State, which lies to the south-east corner of the Provinces, is the most important of the group. It has an area of 13,062 square miles and a population of 433,310. The family of the Raja is very ancient, and is stated to belong to the Rajputs of the Lunar race. Up to the time of the Marathas, Bastar occupied an almost independent position, but a tribute was imposed on it by the Nagpur government in the eighteenth century. At this period the constant feuds between Bastar and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotpad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs. 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The cultivation of the State is extremely sparse. Rice is the most important crop. The State is ruled by the feudatory Chief, Raja Rudra Pratap Deo. He is a Donat of the Order of St. John of Jerusalem. The Dewan of the State (Khan Bahadur Hafiz Mohammad Walayatullah) is an extra Assistant Commissioner of the Central Provinces on deputation who has three assistants under him. After a recent period of disturbance the State has returned to complete tranquillity and precautions are being taken to remove all causes of unrest by better supervision over the minor State officials and a very considerate forest policy. The chief town is Jadgalpur on the Indravati River. The famous falls on the Indravati called the Chitrakote are 23 miles away from Jagdalpur.

Surguja.—Until 1905 this was included in Chota Nagpur State of Bengal. The most important feature is the Manipat, a magnificent tableland forming the southern barrier of the State. The early history of Surguja is obscure; but according to a local tradition in Palamau, the present ruling family is said to be descended from a Raksel Raja of Palamau. In 1758 a Maratha army overran the State, and compelled its chief to acknowledge himself a tributary of the Bhonsla Raja. At the end of the eighteenth century, in consequence of the Chief having aided a rebellion in Palamau against the British, an expedition entered Surguja; and, though order was temporarily restored, disputes again broke out between the Chief and his relations; necessitating British interference. Until 1818 the State continued to be the scene of constant lawlessness; but in that year it was ceded to the British Government under the provisional agreement concluded with Mudhoji Bhonsla of Berar, and order was soon established. The principal crops are rice and other cereals. The present Chief of the State is Maharaja Ramanuj Saran Singh Deo, C.B.E., who succeeded to the *gadi* in 1918 and enjoys full powers of a Feudatory Chief.

KASHMIR.

Kashmir (known to Indians as Jammu) lies to the east of the Indus and to the west of the Ravi. It is a mountainous country with just a strip of level land along the Punjab frontier, and intersected by valleys of which many are of surpassing beauty and grandeur. It may be divided physically into two areas: the north-eastern comprising the area drained by the Indus with its tributaries, and the south-western, including the country drained by the Jhelum, the Kishanganga and the Chenab. The dividing line between those two areas is the great central mountain range. The area of the State is 84,432 square miles, and the population 3,158,126.

HISTORY.—Various poets have left more or less trustworthy records of the history of the valley down to 1586, when it was conquered by Akbar. Srinagar, the capital, had by then been long established, though many of the fine buildings erected by early Hindu rulers had been destroyed by the Mahomedan kings who first appeared in the 12th century. In the reign of Sikandar the population became almost entirely Mahomedan. Akbar visited the valley three times. Jehangir did much to beautify it; but after Aurangzebe there was a period of disorder and decay, and by the middle of the eighteenth century the *Subah* of Kashmir was practically independent of Delhi. Thereafter it experienced the oppression of Afghan rule until it was rescued, in 1819, by an army sent by Ranjit Singh. Sikh rule was less oppressive than that of the Afghans. The history of the State as at present constituted is practically that of one man, a Dogra Rajput, Gulab Singh of Jammu. For his services to the Sikhs this remarkable man had been made Raja of Jammu in 1820, and he added largely to his territory by conquest. He held aloof from the war between the British and the Sikhs, only appearing as mediator after the battle of Sobraon (1846) when the British made over to him for Rs. 75 lakhs the present territories of the State. He had to fight for the valley and subsequently lost part of his State, Gilgit, over which the successors had at a heavy cost to reassert their claims. His son Ranbir Singh, a model Hindu, ruled from 1857 to 1885, when he was succeeded by his eldest son Major-General H. H. Maharaja Sir Partab Singh, G.C.S.I., G.C.I.E., G.B.E., LL.D., &c.

ADMINISTRATION.—For some years the administration of the State was conducted by a Council over which the Maharaja presided. In 1905 enhanced ruling powers were granted to His Highness, the State Council being abolished. Recently His Highness has been invested with the full powers of administration and authority enjoyed by his ancestors. In all matters of administration His Highness is assisted by a Chief Minister, a Revenue Minister, a Home Minister and a Judge of the High Court. General Raja Sir Hari Singh K.C.I.E. is in charge of the Military affairs as Commander-in Chief of the State Army. The portfolio of Chief Minister is held by Major General Rai Bahadur DeWan Bishen Das C.I.E., C.S.I. The British Resident has his headquarters at Srinagar; there is also a Political Agent at Gilgit responsible to the Government of India for the administration of the outlying petty States; and a British Officer is stationed at Leh to assist in the supervision of Central Asian trade. In the Dogras the State has splendid materials for an Army, which consists of 6,961 troops, of whom 3,370 are maintained as Imperial Service troops.

FINANCE.—The financial position of the State is strong, and it has more than 46 lakhs invested in Government of India securities. The total revenue last year was 93 lakhs, the chief items being land revenue, forests, customs and octroi.

PRODUCTION AND INDUSTRY.—The population is pre-eminently agricultural and pastoral. The system of land tenure has been described as "ryotwari in ruins," great complexity existing owing to the fact that there is no local law of rent and revenue. The principal food crop is rice, maize, cotton, saffron, tobacco, hops (autumn crops) and wheat, barley, poppy, beans (spring crops) are also grown. Sheep are largely kept. The State forests are extensive and valuable. A survey of the mineral resources of the State is being conducted under an expert. Vast fields of friable, dusty coal have been found. Gold has been found at Gulmarg, Sapphires in Padar Aquamarine in Skardu and lead in Uri. The industries of manufacture are chiefly connected with sericulture (the silk filature at Srinagar, the largest in the world, was destroyed by fire in July 1912), and oil-pressing The woollen cloth, shawls, and wood carving of the State are famous.

COMMUNICATIONS.—Great efforts have been made and are being made towards the improvement of wheeled traffic in the Kashmir State. The Jhelum Valley Road (196 miles) which links the Kashmir Valley with the Punjab and the North Western Province is used by wheeled traffic of sorts, *viz.*, Ekkas, Tangas, Carts, Motor Cars and Motor Lorries. The Banihal Cart Road (nearly as long as the Jhelum Valley Road) which is nearing completion, will soon join Kashmir with the Jammu Tawi Railway Station. Roads fit for pack-animals lead from Srinagar, the summer Capital of Kashmir, to the frontier districts of Gilgit and Leh. Internal village communications have also been much improved.

PUBLIC WORKS.—In 1904, a flood spill channel above Srinagar was constructed with a view to minimising the constant risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of recent years have been those for an electrical power station on the Jhelum River, and for a Railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise and possibly for working the proposed Kashmir Railway. The works were completed about 1907, and the scheme according to the latest reports is working very satisfactorily. The proposal for a railway to Kashmir had been held in abeyance for the present.

EDUCATION.—In education Kashmir is still backward. In the State as a whole only 2 in every 100 persons can read and write. The number of educational institutions including two Colleges is 715.

Resident:—Lieut-Col. C. J. Windham, C.I.E.

Political Agent at Gilgit—Major D. L. R. Lorimer, C.I.E.

THE CHAMBER OF PRINCES.

The Report on Indian constitutional reforms by Mr. Montagu and Lord Chelmsford stated that it was desired to call into existence a permanent consultative body which would replace the conference of Princes which had periodically met at the invitation of the Viceroy. After pointing out the need for regular meetings of the Council, the Report said:—"We contem-

plate that the Viceroy should be **president**, and should as a rule preside, but that in his absence one of the Princes should be chairman. The rules of business would be framed by the Viceroy after consultation with the Princes, who might from time to time suggest modifications in the rules."

It was further suggested in the joint report that the Council of Princes should be invited annually to appoint a small **standing committee**, to which the Viceroy or the Political Department might refer decisions affecting the Native States, particularly questions dealing with custom or usage. The Joint Report also made recommendations for the appointment of commissions to inquire into disputes in which Native States might be concerned and into cases of misconduct, and for arranging for joint deliberation on matters of common interest between the Council of State and the Council of Princes.

At the end of January 1919 a Conference of the Ruling Princes was held at Delhi, to consider this scheme. The subject which gave rise to the longest discussion was the proposal in the Reform Scheme to divide the Native States into two categories, those possessing "full powers" of internal government and those not having such powers. Some of the Princes held that membership of the Council of Princes should be limited to the rulers enjoying full powers, whilst others considered that some measure of representation ought to be given to the smaller States; and the Conference came to no agreement on the matter. The proposal to institute a Council of Princes received, however, general support, and it was suggested that the new House should be called the **Narendra Mandal** (House of Princes)

The recommendations of the Conference were then placed before the Secretary of State, and in the next Conference held in November 1919 Lord Chelmsford propounded a general scheme for a Chamber of Princes approved by His Majesty's Government. The Conference after debating the question passed a resolution warmly accepting the scheme and expressing an earnest hope that the Chamber might be brought into existence during the ensuing year. On the occasion of the **formal inauguration** of the Chamber of Princes Lord Chelmsford, describing how he enlisted the advice and criticism of the Codification Committee of Princes which had been appointed by the Conference and how with their assistance the drafts of the Constitution of the Chamber with the first Regulations and Rules of Business, and the draft resolution concerning Courts of Arbitration and Commissions of Enquiry were moulded into practical shape, explained that difficulties had arisen in the selection of a suitable Indian designation for the Chamber which would for the present be known by the English title of the Chamber of Princes. He also said that another point on which the published constitution differed from the wording favoured by the Committee of Princes was the absolute prohibition of the discussion in the Chamber of the internal affairs of individual States and the actions of individual Rulers. The main function of the Chamber was to discuss matters affecting the States generally or of common concern to the States and to British India or the Empire at large. As regards the question of direct relations between the Government of India and the important States, a recommendation had been made to the Secretary of State for the transfer of the more important States in the Bombay Presidency, according to a scheme prepared by a special Committee, to be carried into effect at some future date, when the conditions appear to be favourable. A scheme would also shortly be placed before His Majesty's Government for the bringing of the important States of the Punjab into direct relations with the Government of India as soon as the necessary arrangements could be made. Gwalior State would soon be brought into direct touch with the Central Government through a Resident who would be independent of the Central India Agency and some of the Rajputana States, which were formerly in relations with a Local Resident, were now in direct relations with the Agent to the Governor-General in Rajputana.

The Chamber was formally inaugurated by the Duke of Connaught on February 8th, 1921.

Indian States' Tribute.

Many of the States pay tribute, varying in amount according to the circumstances of each case, to the British Government. This tribute is frequently due to exchanges of territory of settlement of claims between the Governments, but is chiefly in lieu of former obligations to supply or maintain troops. The actual annual receipts in the form of tribute and contributions from Indian States are summarised in the following table. The relations of the States to one another in respect of tributes are complicated, and it would serve no useful purpose to enter upon the question. It may, however, be mentioned that a large number of the States of Kathiawar and Gujarat pay tribute of some kind to Baroda, and that Gwalior claims tribute from some of the smaller States of Central India:—

States paying tribute directly to the Government of India.

	£
Tribute from Jaipur	20,667
„ „ Kotah	15,648
„ „ Udaipur	13,333
„ „ Jodhpur	6,533
„ „ Bundi	8,000
„ „ Other States	15,170
Contribution of Jodhpur towards cost of Erinpura Irregular Force	7,667
„ of Kotah towards cost of Deoli Iregular Force	13,333
„ of Bhopal towards cost of Bhopal Levy	10,753
„ of Jaora towards cost of United Malwa Contingent	9,142
Contributions towards cost of Malwa Bhil Corps	2,280
Central Provinces and Berar.	
Tribute from various States	15,696
Burma.	
Tributes from Shan States	28,524
„ „ other States	1,367
Assam.	
Tribute from Manipur	333
„ „ Rambrai	7
Bengal.	
Tribute from various States	4,514 (Cooch Behar).
United Provinces.	
Tribute from Benares	14,600
„ „ Kapurthala (Bahraich)	8,733
Punjab.	
Tribute from Mandi	6,667
„ „ other States	3,086
Madras.	
Tribute from Travancore	53,333
Peshkash and subsidy from Mysore	233,333
„ „ „ „ Cochin	13,333
„ „ „ „ Travancore	888
Bombay.	
Tribute from Kathiawar	31,129
„ „ various petty States	2,825
Contribution from Baroda States	25,000
„ „ Jagirdars, Southern Mahratta Country	5,765
Tribute from Cutch	5,484

It was announced at the Coronation Durbar of 1911 that there would in future be no Nazarana payments on successions.

Foreign Possessions in India.

Portugal and France both hold small territorial possessions in the Indian Peninsula.

The Portuguese possessions in India consist of the province of Goa, situated within the limits of the Bombay Presidency, on the Arabian Sea coast; the territory of Daman with the small territory called Pragana-Nagar Avely on the Gujarat coast, at the entrance to the Gulf of Cambay; and the little island of Diu, with two places called Gogla and Simbor, on the southern extremity of the Kathiawar Peninsula.

GOA.

Goa forms a compact block of territory surrounded by British districts. Savantwadi State lies to the north of it, the Arabian Sea on the west and North Kanara on the south, and the eastern boundary is the range of the Western Ghats, which separates it from the British districts of Belgaum and North Kanara. The extreme length from north to south is 62 miles and the greatest breadth from east to west 40 miles. The territory has a total area of 1,301 square miles and consists of the *Velhas Conquistas*, or Old Conquests, comprising the island of Goa, acquired by the Portuguese in 1510, and the neighbouring municipalities of Salcete, Bardez and Murmugao acquired in 1543; and of the *Novas Conquistas*, or New Conquests, comprising the municipalities of Pernem, Sanquelim, Ponda, Quepem, Canacona, Satari and Sanguem acquired in the latter half of the 18th century. The small island of Angediva situated opposite the port of Karwar, in the British district of North Kanara, forms Administratively a portion of the Canacona municipality. This was acquired in 1505. The whole country is hilly, especially the eastern portion, the predominating physical feature being the Western Ghats, which besides bounding the country along the north-east and south-east, jut off westward and spread across the country in a succession of spurs and ridges. There are several conspicuous isolated peaks, of which the highest, Songsagar, is 3,827 feet high.

The country is intersected by numerous rivers running westward from the Ghats, and the principal eight, which are all navigable, are in size of some importance. Goa possesses a fine harbour, formed by the promontaries of Bardez and Salsette. Half-way between these extremities lies the *cabo*, or cape, which forms the extremity of the island of Goa. This divides the whole bay into two anchorages, known as Aguada and Marmagao. Both are capable of accommodating the largest shipping from September to May, but Aguada is virtually closed during the south-west monsoon, owing to the high winds and sea and to the formation of sand bars across the estuary of the Mandovi river, which opens into Aguada. Marmagao is accessible at all times and is therefore the harbour of commercial importance. It is the terminus of the railway running to the coast from the inland British system of lines, a breakwater and port have been built there and the trade is considerable, being chiefly transit trade from British territory.

The People.

The total population in the whole Goa territory was 486,752 at the census of 1910. This gives a density of 343 persons to the square mile and the population showed an increase of 6 per cent. since the census ten years previously. In the Velhas Conquistas 91 per cent. of the population is Christian. In the Novas Conquistas Christians and Hindus are almost equally numerous. The Moslems in the territory are numbered in a few thousands. The Christians still very largely adhere to caste distinctions, claiming to be Brahmans, Charados and low castes, which do not intermarry. The Hindus are largely Maratha and do not differ from those of the adjacent Konkan districts of Bombay. All classes of the people, with the exception of Europeans, use the Konkani dialect of Marathi, with some admixture of Portuguese words. The official language is Portuguese, which is commonly spoken in the capital and the principal towns, as well as by all educated people. Nearly all the Christians profess the Roman Catholic religion and are spiritually subject to an archbishop, who has the titles of Primate of the East and Patriarch of the East Indies and exercises ecclesiastical jurisdiction also over a great portion of British India. (The Christians of Daman and Diu are subject to a Bishop who bears the titles of Bishop of Daman and Archbishop of Cranganore.) There are numerous churches in Goa, mostly built by the Jesuits and Franciscans prior to the extinction of the religious orders in Portuguese territory. The churches are in charge of secular priests. Hindus and Mahomedans now enjoy perfect freedom in religious matters and have their own places of worship. In the early days of Portuguese rule the worship of Hindu gods in public and the observance of Hindu usages were strictly forbidden and rigorously suppressed.

The Country.

One-third of the entire territory of Goa is stated to be under cultivation. A regular land survey was only recently made. The fertility of the soil varies considerably according to quality, situation and water-supply. The Velhas Conquistas are as a rule better cultivated than the Novas Conquistas. In both these divisions a holding of fifteen or sixteen acres would be considered a good sized farm, and the majority of holdings are of smaller extent. The staple produce of the country is rice, of which there are two good harvests, but the quantity produced is barely sufficient to meet the needs of the population for two-thirds of the year. Next to rice, the culture of cocoanut palms is deemed most important, from the variety of uses to which the products are applied. Hilly places and inferior soils are set apart for the cultivation of cereals and several kinds of fruits and vegetables are cultivated to an important extent. The condition of the agricultural classes in the Velhas Conquistas has improved during recent years,

owing to the general rise in the prices of all classes of agricultural produce and partly to the current of emigration to British territory. Stately forests are found in the Novas Conquistas. They cover an area of 116 square miles and are under conservation and yield some profit to the administration. Iron is found in parts of the territory; but has not been seriously worked. Manganese also exists and was worked to an important extent a few years ago.

Commerce.

In the days of its glory, Goa was the chief entrepot of commerce between East and West and was specially famous for its trade in horses with the Persian Gulf. It lost its commercial importance with the downfall of the Portuguese empire and its trade is now insignificant. Few manufacturing industries of any moment exist, and most manufactured articles in use are imported. Exports chiefly consist of cocoanuts, betel nuts, mangoes and other fruits and raw produce. A line of railway connects Marmagao with the Madras and Southern Mahratta Railway. Its length from Marmagao to Castle Rock, above the Ghats, where it joins the British system, is 51 miles, of which 49 are in Portuguese territory. The railway is under the management of the Madras and Southern Mahratta Railway administration, and the bulk of the trade of Marmagao port is what it brings down from and takes to the interior. The telegraphs in Goa territory are worked as part of the system of British India, and are maintained jointly by the British and Portuguese Governments. The Goa territory was formerly subject to devastating famines and the people now suffer heavy losses in times of drought. They are then supplied, though at great cost, with rice from British territory.

The Capital.

Nova Goa, the present capital of Portuguese India, comprehends Panjim and Ribandar, as well as the old city of Goa, and is six miles in extent. Old Goa is some five miles distant from the new city. Panjim occupies a narrow strip of land leading up to the Cabo, the cape dividing the Aguada bay from that of Marmagoa, and mainly slopes down to the edge of the Aguada. It was selected as the residence of the Portuguese Viceroy in 1759, and in 1843 it was raised to its present rank as the capital of Portuguese India. The appearance of the city, with its row of public buildings and elegant private residences, as seen from the water, is very picturesque and this impression is not belied by a closer inspection of its neat and spacious roads, bordered by decent, tidy houses. The most imposing public structures are the barracks, an immense quadrangular building the eastern wing of which accommodates the Lyceum, the Public Library and the Government Press. Other noticeable buildings are the Cathedral and various churches, the vice-regal palace, the High Court and so on. The square in the lower part of the town is adorned with a life-sized statue of Albuquerque standing under a canopy.

History.

Goa was captured for the Portuguese by Affonso de Albuquerque in 1510. Albuquerque promptly fortified the place and established Portuguese rule on a firm basis. From this time Goa rapidly rose in importance and became the metropolis of Portuguese power in the East. There was constant fighting with the armies of the Bijapur kingdom, but the Portuguese held their own and gained the surrounding territory now known as the Velhas Conquistas.

The subsequent history of the town is one of ostentation and decay. Goa reached its summit of prosperity at the end of the sixteenth century. The accounts of travellers show that the Goa of those days presented a scene of military, ecclesiastical and commercial magnificence which has had no parallel in the British capitals of India. But the Portuguese based their dominion in India on conquest by the sword and they laboured to consolidate it by a proselytizing organisation which throws the missionary efforts of every other European power in India into the shade. Old Goa, as the ruins of the old capital are called to-day, had a hundred churches, many of them of magnificent proportions, and the Inquisition which was a power in the land. The result showed how rotten was this basis and how feebly cemented the superstructure reared upon it.

Modern Times.

There was frequently recurring fighting and in 1741 the Marathas invaded the neighbourhood of Goa and threatened the city itself. An army of 12,000 men arrived from Portugal at the critical moment. The invaders were beaten off, and the Novas Conquistas were added to the Portuguese possessions. In 1844 the shelter given by Goa to fugitives from justice in British territory threatened to bring about a rupture with the British Government at Bombay. In 1852 the Ranes of Satari, in the Novas Conquistas revolted. In 1871 the native army in Goa mutinied and the king's own brother came from Lisbon to deal with the trouble and having done so disbanded the native army, which has never been reconstituted. But another outbreak among the troops took place in 1895 and the Ranes joining them the trouble was again not quieted until the arrival of another special expedition from Lisbon. The Ranes again broke out in 1901 and again in 1912, troops being again imported to deal with the last outbreak, which was only reported concluded in the summer of 1913.

Administration.

The Lisbon Government by Decree No. 3266, dated 27th July 1917, enacted new rules regarding the administration of Portuguese India under an Organic Charter (Carta Organica) in force since 1st July 1919. This Charter, regarding civil and financial administration of the colony was modified by rules Nos. 1005 and 1022, dated 7th and 20th August 1920, and decrees Nos. 7008 and 7030, dated 9th and 16th October.

As the principal organ of administration next to the Governor-General, and in collaboration with him, are working two councils—Legislative and Executive. The Executive Council is composed by the Governor-General, His Excellency Zaime Alberto de Castro Morais, Attorney General and four chiefs of Services appointed yearly by the

Governor-General subject to the approval of the Executive Power, and a member appointed yearly under identical circumstances. These chiefs in the present year are: the Secretary General, the Director of Public Works, the Head of Marine Department and the Director of Finances.

The Legislative Council is constituted by the member of the Executive Council and by non-official members. These members are: one representative for the Ilhas Municipality, one for the Bardez Municipality, one for the Marmugao and Salcete Municipalities, one for the Novas Conquistas Municipalities, one for the district of Daman and one for district of Diu; one citizen elected by the Commercial and Industrial Associations; one citizen elected by 90 highest tax payers; one citizen elected by the Associations of Agriculture and of Landowners; one citizen elected by the Attorneys of the Communities and one citizen elected by the Associations of Class.

Under the Presidency of the Governor of each district there is District Council, which in Goa is composed of—the Secretary General, President; the Attorney General's Delegate at the Civil Court of the Islands; the Deputy Chief Health Officer; the Engineer next to the Director of Public Works: the Deputy Director of Finances; the Chairman of the Municipal Corporation of the Islands; one member elected by the Commercial and Industrial Associations of the district one member elected by the 60 highest tax payers of Goa; one member elected by the Associations of Landowners and Farmers of the District and one member advocates elected by the Legislative Council among the legally qualified.

At Daman and Diu the corresponding body is composed of the local Governor as President, the Delegate of the Attorney General, the Chief of the Public Works Department, the Health Officer, the Financial Director of the district, the Chairman of the Municipal Corporation, two members elected by 40 highest tax payers of the District and one member elected by the Merchants, Industrialists and Farmers of the district.

Under the provisions of the above quoted Decree is also officiating in the capital of Portuguese India a special tribunal to take cognizance and decide all litigious administrative matters, fiscal questions and accounts. It is named *Tribunal Administrative Fiscaleds Contas* and is composed of the Chief Justice as President, two High Court Judges, the Fiscal Auditor and the citizens who are not government officers nor belong to the administration, bodies of corporations, whether they may be or may not be on acutal duty, elected by the Legislative Council, two of whom are advocates and the third a merchant, industrialist or landowner or a highest tax payer. In the decision of matters of account the Director of Finances also sits on the special tribunal.

Under the presidency of the Governor-General the following bodies are also working:—

Technical Council of Public Works.—Its members are all engineers on permanent duty in the head office, a military officer of highest rank in the army or navy, the Director of Finances, the Attorney-General, the Chief Health Officer and a Secretary being a clerk of the Public Works Department appointed by the Director of Public Works.

Council of Public Instruction.—This is composed of three members appointed by Government and six elected among the Professors, there being one elected by the Medical College of Nova-Goa, two by the Lyceum of Nova-Goa, one by the Commercial Institute, one by the Normal School and one by the Corporation of the Professors of Primary Instruction.

There is also Financial Council composed by the Fiscal Auditor and by the Judges of both Civil and Criminal Jurisdictions of the Judicial division of Ilhas.

DAMAN.

The settlement of Daman lies at the entrance to the Gulf of Cambay, about 100 miles north of Bombay. It is composed of two portions, namely, Daman proper, lying on the coast, and the detached pargana of Nagar Aveli, separated from it by a narrow strip of British territory and bisected by the B. B. & C. I. Railway. Daman proper contains an area of 22 square miles and 26 villages and has a population (1910) of 18,300. Nagar Aveli has an area of 60 square miles and a population (1910) of 29,020. The town of Daman was sacked by the Portuguese in 1531, rebuilt by the natives and retaken by the Portuguese in 1558, when they made it one of their permanent establishments in India. They converted the mosque into a church and have since built eight other places of worship. Of the total population the number of Christians is 1,586. The number of houses is 8,971, according to the same census. The native Christians adopt the European costume, some of the women dressing themselves after the present European fashion, and others following the old style of petticoat and mantle once prevalent in Spain and Portugal.

The soil of the settlement is moist and fertile especially in the pargana of Nagar Aveli, but despite the ease of cultivation only one-twentieth part of the territory is under tillage. The principal crops are rice, wheat, the inferior cereals of Gujarat and tobacco. The settlement contains no minerals. There are stately forests in Nagar Aveli, and about two-thirds of them consist of teak, but the forests are not conserved and the extent of land covered by each kind of timber has not been determined. Before the decline of Portuguese power in the East, Daman carried on an extensive commerce, especially with the east coast of Africa. In those days it was noted for its dyeing and weaving.

The territory forms for administrative purposes a single district and has a Municipal Chamber and Corporation. It is ruled by a Governor invested with both civil and military functions, subordinate to the Governor-General of Goa. The judicial department is administered by a judge, with an establishment composed of a delegate of the Attorney-General and two clerks. In Nagar Aveli the greater part of the soil is the property of the Government, from whom the cultivators hold their tenures direct. A tax is levied on all lands, whether alienated or the property of the State. The chief sources of revenue are land-tax, forests, excise and customs duties.

DIU.

Diu is an island lying off the southern extremity of the Kathiawar Peninsula, from which it is separated by a narrow channel through a considerable swamp. It is composed of three portions, namely, Diu proper (island), the village of Gogla, on the Peninsula, separated by the channel, and the fortress of Simbor, about 5 miles west of the island. It has a small but excellent harbour, where vessels can safely ride at anchor in two fathoms of water and owing to the great advantages which its position offers for trade with Arabia and the Persian Gulf, the Portuguese were fired at an early period with a desire to obtain possession of it. This they gained, first by treaty with the Sultan of Gujarat and then by force of arms. Diu became opulent and famous for its commerce. It has now dwindled into insignificance. The extreme length of the island is about seven miles and its breadth, from north to south, two miles. The area is 20 square miles. The population of the town of Diu, from which the island takes its name, is said to have been 50,000 in the days of its commercial prosperity. The total population of the island, according to the census of 1910, is 14,170, of whom 271 were Christians.

FRENCH POSSESSIONS.

The French possessions in India comprise five Settlements, with certain dependent lodges, or plots. They aggregate 203 square miles, and had a total population in 1912 of 282,386. The first French expedition into Indian waters, with a view to open up commercial relations, was attempted in 1603. It was undertaken by private merchants at Rouen, but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first Campagnie d'Orient, but its efforts met with no success. Colbert reconstituted the Company on a larger basis in 1664, granting exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India and its President, Caron, founded in 1668 the Comptoir, or agency, at Surat. But on finding that city unsuited for a head establishment he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Coromandel coast, in 1672 seized St. Thome, a Portuguese town adjoining Madras, which had for twelve years been in the possession of Holland. He was, however, compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending when one of its agents, the celebrated Francois Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thome, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Raja of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who wrested it from him in 1693, and held it until it was restored to the French by the Peace of Ryswick in 1697. Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta. Like Calcutta, its site was purchased by a European Company from a native prince, and what Job Charnock was to Calcutta Francois Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed Governor, and under his able management Pondicherry became an entrepot of trade.

Chandernagar, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi Emperor; Mahé, on the Malabar Coast, was obtained in 1725-6, under the government of M. Lenoir; Karikal, on the Coromandel Coast, under that of M. Duma, in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

Administration.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. The office is at present held by Monsieur L Gerbinis. He is assisted by a Chief Justice and by several "Chefs de Service" in the different administrative departments. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Seventeen Municipalities, or Communal Boards, were erected in 1907, namely, Pondicherry, Arlancoupam, Modeliarpeth, Oulgaret, Villenour, Tirouboúvane, Bahour and Nettapacam, for the establishment of Pondicherry; Karikal, Neravy, Nedouncadou, Tirunalar, Grande Aldée, Cotchéry, for the establishment

of Karikal, and also Chandernagar, Mahé and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance and a court of appeal compose the judicial machinery. The army and establishments connected with the Governor and his staff at Pondicherry, and those of administrators at Chandernagar, Yanam, Mahe and Karikal, together with other headquarters charges, necessarily engioss a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of an Archbishop, with a body of priests for all French India; and of the Missions Etrangeres, the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements, a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the ordinary tender within French territories. A line of railway running *via* Villenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Karikal is linked to the same railway by the branch from Peralam. A Chamber of Commerce consisting of fifteen members, nine of them Europeans or persons of European descent, was reorganised by a decree of 7th March, 1914. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilisation.

People and Trade.

The Settlements are represented in Parliament at Paris by one senator and one deputy. These are at the present time Mons. E. Flandin and Mons. P. Bluysen, respectively. There were in 1920, 56 primary schools and 3 colleges, all maintained by the Government, with 240 teachers and 7,848 pupils Local revenue and expenditure (budget of 1921) Rs. 24,57,850. The principal crops are paddy, groundnut, and ragi. There are at Pondicherry 5 cotton mills, and at Chandernagar 1 jute mill; the cotton mills have, in all, 1,628 looms and 70,376 spindles, employing12,020 persons. There are also at work one oil factory and a few oil presses for groundnuts, one ice factory, one ironworks and a cocotine factory. The chief exports from Pondicherry are oil seeds. At the ports of Pondicherry, Karikal, and Mahé in 1920 the imports amounted to 673,076,798 francs and the exports to 23,805,649 francs. At these three ports in 1920, 244 vessels entered and cleared. Tonnage 42,343 T825. Pondicherry s visited by French steamers, sailing monthly between Colombo and Calcutta in connection with the Messageries Maritimes. The figures contained in this paragraph are the latest available and are corrected up to December 1920.

PONDICHERRY.

Pondicherry is the chief of the French Settlements in India and its capital is the headquarters of their Governor. It is situated on the Coromandel Coast, 105 miles from Madras by road and 122 by the Villupuram-Pondicherry branch of the South Indian Railway. The area of the Settlement is 115 square miles and its population in 1921 was 269,579. It consists of the four communes of Pondicherry. The Settlement was founded in 1674 under Francois Martin. In 1693 it was captured by the Dutch but was restored in 1699. It was besieged four times by the English. The first siege under Admiral Boscawen in 1748 was unsuccessful. The second, under Eyre Coote in 1761, resulted in the capture of the place, which was restored in 1765. It was again besieged and captured in 1778 by Sir Hector Munro, and the fortifications were demolished in 1779. The place was again restored in 1785 under the Treaty of Versailles of 1783. It was captured a fourth time by Colonel Braithwaite in 1793, and finally restored in 1816.

The Settlement comprises a number of isolated pieces of territory which are cut off from the main part and surrounded by the British District of South Arcot, except where they border on the sea. The Collector of South Arcot is empowered to deal with ordinary correspondence with the French authorities on these and kindred matters, and in this capacity is styled the Special Agent. At Pondicherry itself is a British Consular Agent accredited to the French Government; who is usually an officer of the Indian Army. The town is compact, neat and clean, and is divided by a canal into two parts, the Ville blanche and the Ville noire. The Ville blanche has a European appearance, the streets being laid at right angles to one another with trees along their margins reminding the visitor of continental boulevards, and the houses being constructed with courtyards and embellished with green venetians. All the cross streets lead down to the shore, where a wide promenade facing the sea is again different from anything of its kind in British India. In the middle is a screw-pile pier, which serves, when ships touch at the port, as a point for the landing of cargo, and on holidays as a general promenade for the population. Theré is no real harbour at Pon licherry; ships lie at a distance of about a mile from the shore, and communication with them is conducted by the usual *masula* boats of this coast. Facing the shore end of the pier is a statue of the great Dupleix, to whom the place and the French name owed so much.

CHANDERNAGAR.

Chandernagar is situated on the bank of the Hooghly, a short distance below Chinsura. Population (1921) 25,423. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix. It changed hands between British and French various times during the Napoleonic wars and was finally restored to the French in 1816.

The former grandeur of Chandernagar has disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian Railway is just outside French territory 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator who is subordinate to the Governor of the French Possessions. The chief public institution is the College Dupleix, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Government.

KARIKAL.

Karikal lies on the Coromandel Coast between the Tanjore District of Madras and the Bay of Bengal. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles. It is governed by an Administrator subordinate to the Governor at Pondicherry. The population has in recent years rapidly decreased. In 1883 it was 93,055; in 1891, 70,526; in 1901, 56,595; in 1912, 56,579; and in 1921, 54,356 in 1915, 56,867; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only taluk in Tanjore District which has a higher density. Each of the three communes—namely, Karikal, La Grande Aldee, and Nedungadu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Karikal half the number of seats are reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery, besides many smaller channels.

The capital of the settlement is situated on the north bank of the river Arasalar, about 1½ miles from its mouth. It has a brisk trade in rice with Ceylon, and to a less extent with the Straits Settlements. It has no commerce with France, and very little with other French colonies. The port is merely an open roadstead, provided with a light-house 142 feet high, the light in which has a range of from 8 to 10 miles. In 1899 Karikal was connected with Peralem on the Tanjore District Board Railway. Karikal finally came into French possession on the settlement after 1815.

The Frontiers.

The history of the Indian frontiers for nearly three-quarters of a century is a reflection of the balance of power in Europe. As one Power after another, first Russia and then Germany, sought to secure the hegemony of Europe, and then to use that hegemony to overset the British Empire, in both cases by an attack on its position in Asia, so Great Britain was inexorably arrayed against each in turn. Now both have disappeared as great military Powers; as nature abhors a vacuum, so in foreign politics there is no vacuum. New problems have arisen over the vacancy left by the collapse of Russia and the defeat of Germany. It is impossible yet to say in what direction they will develope.

Effects of the War.—The effect of the war was to raise a whole crop of new problems in Asia Minor, and incidentally on the Indian Frontiers. When in an evil moment for Turkey Enver Pasha precipitated her into the war on the side of Germany, the area of conflict extended to Asia Minor. There the campaigns pursued a chequered course. The Russians were more than once somewhat severely pressed in the region of the Caucasus, but after the brilliant capture of Erzeroum they were secure until the success of the Bolsheviks in Russia itself induced the complete military collapse of the Empire and made the Turks and the Germans masters of what may for convenience be called the Russian zone in Asia Minor. In Syria the Turks remained masters of the situation until the sweeping victories of General Allenby smote them hip and thigh and so completely destroyed their military power that they were compelled first to sue for an Armistice and then accept the virtually unconditional peace of Sevres. In Mesopotamia the course of the war was chequered. At first the Allies carried all before them. Landing at the mouth of the Shatt-al-Arab, a strong British force fought its way to Basra and Kurna; next to Kut-al-Amara; but these successes brought disaster in their train. Lured by the spell of Baghdad, a weak British corps attempted to seize the historic city by a coup de main; the Turks were severely defeated at Ctesiphon but the large reinforcements which they had received made the position of the British troops impossible and they withdrew to Kut-al-Amara. After a protracted siege marked by desperate attempts to relieve the beleaguered garrison, they surrendered. Later under General Maude the British forces completely crushed the Turks and won their way first to Baghdad and then to Mosul and the confines of Kurdistan. But the legacy of the defeat of Ctesiphon was severe. The Turks overran a considerable part of Eastern Persia, and completed the work of destruction commenced by the armed scally wags who under German officers had been ravaging that unhappy land. The Russians who had advanced almost to within striking distance of Baghdad were forced to withdraw. Consequently when the victories of Maude opened the path again the country had been wrecked by plunder and anarchy.

Legacy of the Disorders:—A completely new system of administration had therefore to be established in Asia Minor and in Persia to replace that either overset or shaken by the war. The process of this has been infinitely tedious, and though at the end of the year 1921 events seemed to be moving towards a settlement, none such had been reached. An effort was made to regularise the situation in the old Turkish State by the Treaty of Sevres but that has not been ratified and for all practical purposes is dead. Under that Treaty the Turkish Government was retained in Constantinople, but Thrace, and Smyrna with a belt of country, were entrusted to the administration of Greece; France assumed mandates for Cilicia and Syria; a Zionist State under a British mandate was set up in Palestine; the Hedjaz and Mesopotamia were declared free, the Hedjaz under King Hussein and Mesopotamia under the mandate of Great Britain. But the long delay between the surrender of Turkey and the signing of the Peace Treaty introduced fresh confusions. Mustapha Kemal Pasha, at the head of a Young Turk movement, set up a government independent of Constantinople with its capital at Angora. The Constantinople Government was unable to make head against it. What is called the Turkish Government, that is the Government of Constantinople, has no authority in the country outside Constantinople itself, and there it retains a precarious authority with the support of the Allied troops. If that were withdrawn it would collapse in twenty-four hours. Whilst this puppet Government has been maintained in Constantinople, the *de-facto* government of the greater part of the Turkish State has been that of the Nationalists at Angora. This Government, in league with the Bolsheviks, has established and continued its authority throughout most of Asia Minor. In the course of the year 1921 the Greeks, mobilising all their available military strength, endeavoured to drive it from Angora. After considerable early successes they arrived at the defences of Angora, where the offensive broke down and the Greeks retired to their lines covering Smyrna. The French, recognising the realities of the situation, made an independent treaty with Mustapha Kemal Pasha and evacuated the mandated territory of Cilicia in favour of the Nationalists. Whilst this independent action of the French was the subject of much bitter protest, the necessity for their action has not been gainsaid. The French remain in Syria, the Zionist State of Palestine is upheld by five thousand British troops, and a small administrative area has been carved out of trans-Jordania for the Emir Abdullah, a son of the King of the Hedjaz. In the Hedjaz King Hussein is absolutely independent save for the subsidy which he draws from the British Government. But beset by faction at home and the threat of Ibn Saud, the Emir of Nejd, from without, his position is not a very secure one. The British Government pays the King of the Hedjaz a subsidy to rule the Hedjaz, and Ibn Saud another subsidy to refrain from turning him out.

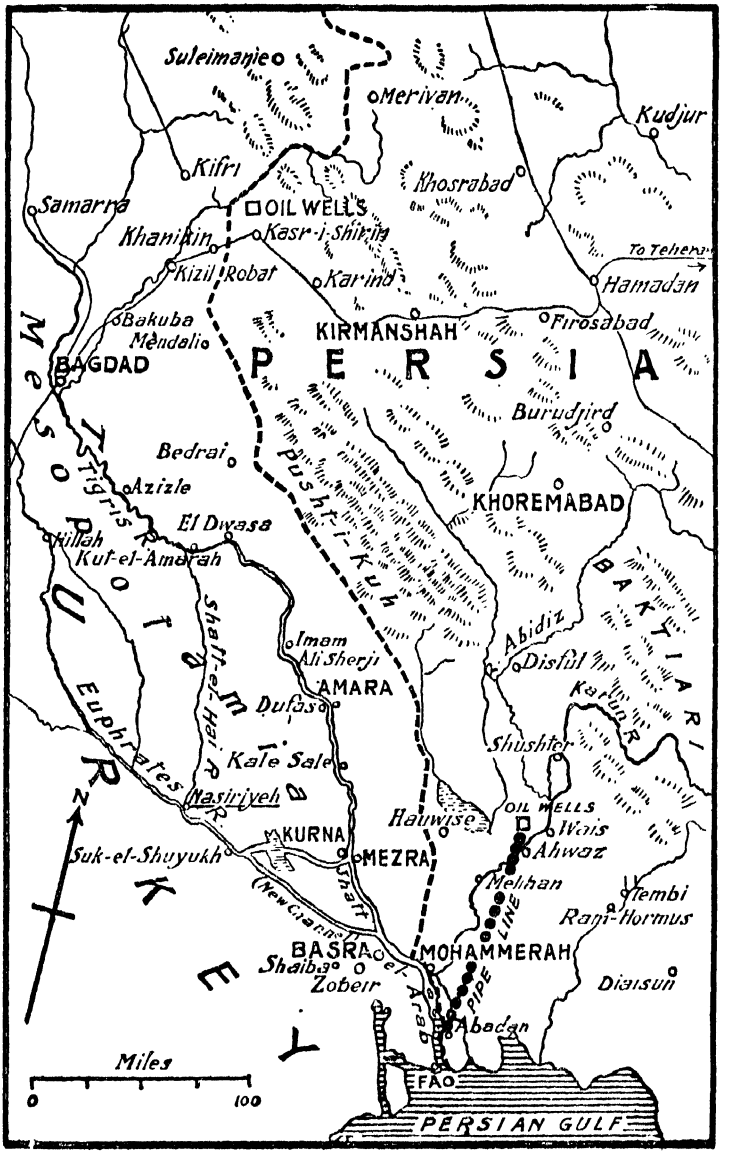
To-wards the close of the year there were many stories of a pending attack by Ibn Saud on King Hussein, but these were contradicted. In Mesopotamia another son of King Hussein, the Emir Feisal, was installed as King, under a treaty with Great Britain as the mandatory power, and up to the close of the year his authority had not been openly called into question and the British forces in the country were substantially reduced.

Persia.—Events of capital importance occurred in Persia. In 1919 there was signed the Anglo-Persian Treaty, the purpose of which was, according to the principal author, Lord Curzon, to preserve the splendour and independence of Persia, with Great Britain as her benevolent friend. But the Persians persisted in regarding it in another light. They first interpreted it as a protection against the Bolsheviks. When the Bolsheviks attacked in the neighbourhood of Enzeli and Resht, and the small British forces in that zone withdrew before their advance, the Persians realised that they must rely on themselves for their defence. They had no use for the Treaty. They therefore refused to ratify it; they made their peace with the Bolsheviks; and the system of British assistance in the reorganisation of the finances and the army contemplated under the Treaty fell to the ground. Britain withdrew entirely from any special interest in Persian affairs; the South Persian Rifles, a force under British officers for the maintenance of order in Southern Persia, was disbanded; and Persians became entirely responsible for their own affairs. One change of power has succeeded another so quickly that it is impossible to know who is nominally in power and what form of government exists, save that there is still the shadow of the personal rule of the Shah. Whether of friendship, or because of the immense internal complications raised by the terrible famine, the Bolsheviks have apparently abandoned any hostile measures against Persia, who is given breathing time.

Afghanistan.—Events in Afghanistan have pursued an even more dramatic course. During the war His Majesty the Amir Habibullah Khan maintained his authority unimpaired, and his pledge of neutrality unbroken, though in deference to the pro-Turk and fanatical elements in the State he had to receive Turkish, Austrian and German delegations. The final victory of the Allies was the triumph of his policy; it also sounded the death knell of his enemies. Knowing that their time had come they removed him by assassination whilst he slept in his tent near Jelalabad. It was the intention of the revolutionaries to place his brother, Nasrullah Khan, on the throne, but public sentiment in Afghanistan revolted against the spectacle of a succession over the dead body of the murdered Amir. Moreover his son, Amanullah Khan, Governor of Kabul, secured the adherence of the Army and Nasrullah Khan had to make his submission. But the new Amir soon experienced the fate of all who ascend thrones through the agency of a Pretorian Guard. As the only means of allaying the discontents of the Army he launched it on an unprovoked war with India, inspired by the belief that not only would he find in this way a happy issue out of his difficulties, but that he would raise the tribesmen on the Frontier and that he would receive the support of the discontented elements in India. In this he was largely deceived. The large forces mobilised by the Indian Government soon shattered the armies of Afghanistan. Dacca was speedily occupied and there was nothing to prevent the occupation of Jelalabad and Kabul, but the knowledge that whilst it is not difficult to overthrow a King of Afghanistan, it is quite another matter to set up a durable administration in its stead. The Amir sued for peace and easy terms were accorded him. Subsequently a conference was held at Mussoorie, to settle the basis of a permanent peace with Afghanistan, and it is understood that definite agreement was reached on the main points. To consolidate this agreement in a Treaty, a British-Indian Mission under Sir Henry Dobbs left India for Kabul to arrange details. There certain difficulties intervened. Whilst there was no official pronouncement, it is understood that the principal difficulty arose from the conclusion of a very close Treaty between Afghanistan and the Bolsheviks. The fears that this would render the work of the Dobbs Mission nugatory were however dissipated when it was announced in November that a definite Treaty of peace had been signed. Details of this appear under the heading of Afghanistan. The Dobbs Mission thereupon returned to India.

The Outlook—Persia has now apparently secured what she wanted, complete freedom to manage her own affairs. A definite Treaty of Peace has regularised the relations of Great Britain and India with Afghanistan. But the war with Afghanistan has left its aftermath on the Frontier. The hopes of the Afghans were built on the belief that the Tribes would join them *en masse*. This they did not do. But the Wazirs seized the occasion to invade British territory; there was widespread trouble right into Baluchistan; and the Frontier Militia, who had been entrusted with the duty of preserving order, proved a broken reed. There was a long and troublesome campaign against the Wazirs, the end of which was that the Indian Government had to decide to occupy a central position in the country for the maintenance of peace. The Frontier remains in a state of considerable unrest, with frequent encounters with the Police. The duty of maintaining order has to be assumed by the Regular Army in place of the Frontier Militia pending the evolution of a new Frontier policy.

All who see clearly recognise that the primary necessity of the situation is now the establishment of peace with and within Turkey, and this can be attained only by the recognition of the Nationalist Government at Angora. Towards this events seem to be tending, but they are moving with desperate slowness.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PERSIAN GULF

THE PERSIAN GULF.

Our first appearances in the Persian Gulf was in connection with the long struggle for supremacy with the Portuguese, the French and the Dutch, who had established trading stations there. With the capture and destruction of the great entrepot which the Portuguese had established at Ormuz, and the supersession of the land route by the sea route, coupled with the appearance of anarchy in the interior, the importance of the Gulf declined. The Indian Government remained there primarily to preserve the peace, and this task it has since successfully performed. Piracy, which was as destructive as the ravages of the Barbary corsairs, was stamped out, the Trucial Chiefs who occupy the Pirate Coast were gradually brought into close relations with the British Government, and the vessels of the Royal Navy have since kept watch and ward in the Gulf, whilst our Consuls have regulated the external affairs of the Arab rulers on the Arabian Coast.

A Policy of Abnegation.

In return for these services Great Britain has claimed no selfish advantages. The waters of the Gulf are as free to the navigation of other flags as to the Red Ensign. The only territorial possession is the tiny station of Bassidu. Point after point has at one time or another been occupied by British troops. Muhammerah and the lower valley of the Karun valley were occupied during the war with Persian in 1857. Bushire was long held in the same connection, and still bears marks of our regime in the one tolerable road. The Island of Kharak was occupied from 1838 to 1842, and again in 1857. We had a military station at Kais during the Pirate wars, and a military and naval station at Kishm from 1820 to 1879. Jask was occupied as a cable station, but subsequently returned to Persia. The only surveys of the waters are British; the only cables are British; the few navigation marks are maintained by the British India Company, and two steamship services, a fast mail service and a slow trading service, are run by the same corporation. Apart from these direct acts, Great Britain might at any time have seized the whole Arabian Coast and the Persian shore. But in pursuit of a resolute self-denying ordinance she has kept the peace and demanded no reward.

European Intrusions.

Left to herself, Great Britain would desire no other policy. But the affairs of the Persian Gulf have passed into the region of international politics, and the past quarter of a century has witnessed successive efforts to turn the British position. Basing her interference on a treaty which gives her equal rights with Great Britain, France attempted to acquire a coaling station at Jissa, near Maskat, and subsequently obstructed British efforts to stamp out the slave trade, and the arms traffic, which was supplying weapons of precision to the tribes on our North-Western Frontier. Turkey, whether acting on her own volition, or as the *avant courier* of Germany, threatened the territory of the Sheikh of Bahrein, who is in special relations with us, and of the Sheikh of Koweit, who owns the only harbour which would make a Gulf terminus of the Baghdad Railway. Persia, stirred from Teheran, when Russian influence at the court of the Shah in Shah was supreme, established a foreign Customs service in the Gulf, and pressed our good friend, the Sheikh of Muhammerah. Russia and Germany sent heavily-subsidised merchant ships into the Gulf, in order to establish trading rights, and posted Consuls, where there was neither trade nor legitimate interest.

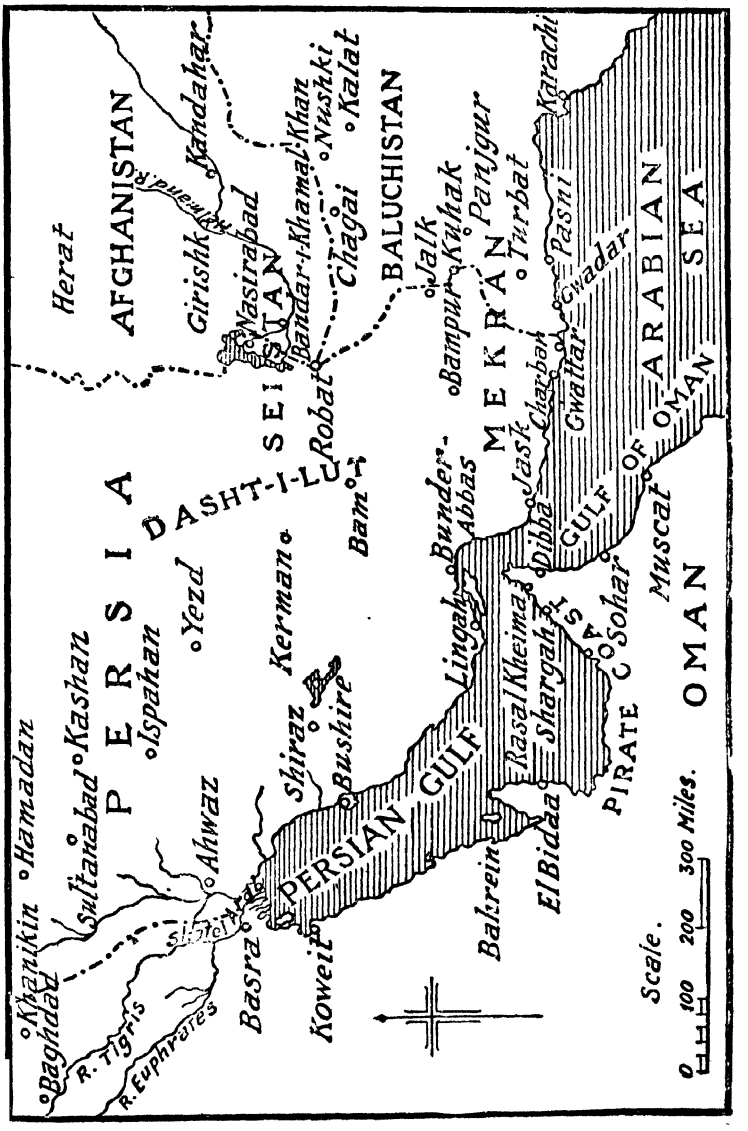
The Gulf and the Empire.

With these attacks there came also a closer appreciation of the bearing of the Persian Gulf on the defence of the Indian Empire. The strategic importance of these waters has been laid down by a writer of unchallenged authority and unbiassed mind. Writing in the *National Review*, Admiral Mahan said, "Concession in the Persian Gulf, whether by formal arrangement (with other Powers) or by neglect of the local commercial interests which now underlie political and military control, will imperil Great Britain's naval situation in the Farther East, her political position in India; her commercial interests in both, and the Imperial tie between herself and Australasia." Following this, successive British Governments have made declarations of policy which are satisfactory, as far as words can go. Speaking in the House of Lords on May 5, 1903, Lord Lansdowne, then Secretary of State for Foreign Affairs, said "We (*i.e.*, His Majesty's Government) should regard the establishment of a naval base or of a fortified port in the Persian Gulf by any other Power as a very grave menace to British interests which we should certainly resist with all the means at our disposal." This declaration of policy has since been endorsed by Sir Edward Grey. But the question which arises is whether, in view of the intrusion of foreign Powers with aggressive designs, and the changing conditions on the littoral, the purely negative policy which has hitherto satisfied Great Britain will suffice. It is a hard fact but a true one, that if British authority disappeared to-morrow, it would leave no other relic than the Abadan oil refinery; a few consular buildings and the tradition of justice and fair dealing. That is a question which can best be considered after a brief survey of the various jurisdictions which are established in the Gulf.

Maskat.

Maskat, which is reached in about forty-eight hours from Karachi, is outside the Persian Gulf proper. It lies three hundred miles south of Cape Musandim, which is the real entrance to the Gulf, but its natural strength and historical prestige combine to make it inseparable from the politics of the Gulf, with which it has always been intimately associated.

The approach to Maskat is dramatic. The mail steamer gently feels her way along a coast more black and forbidding even than the iron-bound littoral of the Gulf of Suez, which is so familiar to the eastward passenger. Sud-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R. Euphrates
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Bunder-Abbas
Lingah
MEKRAN
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Pasni
Karachi
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Dibba
Gwattar
Gwadar
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0 100 200 300 Miles.

denly there appear on the coast the white houses of the trading settlement of Mattra, which lies to the north of Maskat. Then with a sharp turn the bow of the steamer passes under a gaunt rock painted with the names of the warships which have visited Maskat for half a century, and enters the landlocked harbour. Twin fortresses erected by the Portuguese command the heights which overlook the town; the town itself clusters on the shore and climbs the high ground behind it, and itself is shut off from the Arabian desert by a stout wall on the landward side. Formerly Maskat was part of a domain which embraced Zanzibar, and the Islands of Kishm and Larak, with Bunder Abbas on the Persian shore. Zanzibar was separated from it by agreement, and the Persians succeeded in establishing their authority over the possessions on the eastern shore.

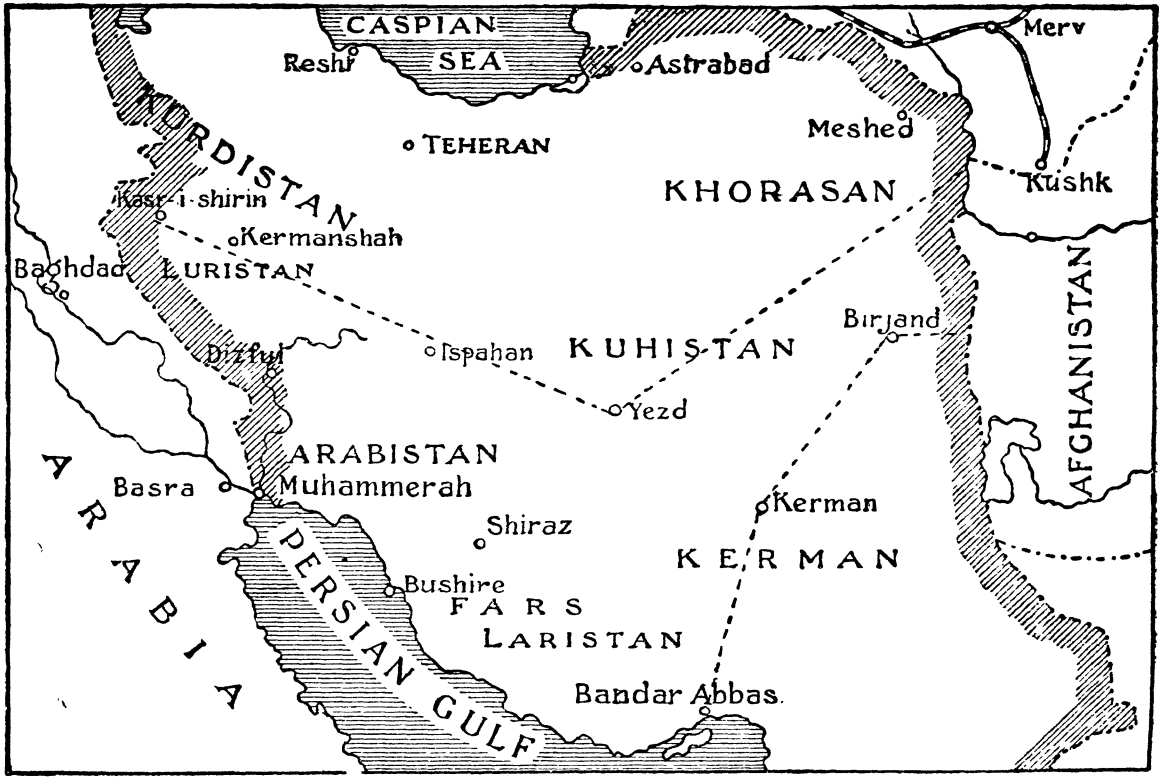
The relations between Britain and Maskat have been intimate for a century and more. It was under British auspices that the separation between Zanzibar and Maskat was effected, the Sheikh accepted a British subsidy in return for the suppression of the slave trade and in 1892 sealed his dependence upon us by concluding a treaty pledging himself not to cede any part of his territory without our consent. Foreign intrigues with Maskat did not commence until 1894, when the French, in pursuit of the pin-pricking policy through which they were avenging Egypt, and perhaps to assist Russia, established a consulate there. The Sultan was induced to cede to France a coaling station at Jissa, but this was such a clear violation of the Treaty of 1892 that it could not make good, and France had to accept the poor alternative of a leased depot. A more serious dispute arose over the use of the French flag to cover the slave trade. Native craft would secure the protection of the French flag by registering at Jibutil, and then defy the Sultan of Maskat, and they were enabled to traffic in slaves with impunity, inasmuch as there was rarely a French warship in the neighbourhood to search them. In April 1903 the trouble came to a head, and the French flagship Infernet was sent to Maskat to demand the release of dhows which had been arrested for a flagrant breach of the quarantine rules. This emphasised the necessity of a permanent settlement, and the question was referred to the Hague Tribunal, and a working compromise arranged. It was adjudged by the Hague Tribunal in 1905 that "after January 2, 1892, France was not entitled to authorise vessels belonging to subjects of H. H. the Sultan of Maskat to fly the French flag," except on condition that their "owners or fitters-out had established, or should establish, that they had been considered and treated by France as her protéges before the year 1863," though "owners of dhows who before 1892 had been authorised by France to fly the French flag retained this authorisation as long as France renewed it to the grantee." The conclusion of the *entente* with France put an end to these pinpricks, but one important issue remained outstanding until 1914. France claimed under the Anglo-French Treaty of 1862 freedom of trade with Maskat. There was carried on for years a lucrative arms traffic with the Gulf, rifles and ammunition being shipped from Europe to Maskat, and thence distributed all over the littoral and even to the North-West Frontier of India. The extent of this evil compelled the British Government to intervene, and elaborate arrangements were made to check the traffic by arresting the dhows carrying arms and by harrying the gunrunners ashore. In effect, the British warships had to witness the dumping of cargoes on the shore at Maskat, see them loaded into dhows, and trust to their own vigilance to arrest these consignments on the high seas. Prompted by the Colonial Party, the French Government refused to yield one jot of their treaty rights, in the hope that Great Britain would buy them out by surrenders at Gambia. The difficulty was largely overcome by the establishment of a bonded warehouse for arms at Maskat, where all consignments have to be deposited, and whence they are only issued under certificates of destination; and by an agreement negotiated in 1914 the French Government recognised the new Arms Traffic Regulations and abandoned the privileges and immunities secured to them by Treaty. Compensation was paid by the British Government to those French merchants whose stocks were rendered valueless by the Regulations.

In 1873 jurisdiction was given to the Vice-Admiralty Court at Aden and the consuls within the dominions of Zanzibar, Maskat, and Madagascar for the more effectual suppression of the slave trade on the East Coast of Africa. By an Order-in-Council which came into force on August 1, 1914, the Act had been extended so as to comprise the Court established by the Persian Coast and Islands Order-in-Council, 1907. Thus the Consuls-General for Fars and the coasts and islands of the Persian Gulf will be able to enforce the suppression of the slave trade in that neighbourhood which was agreed to be desirable in a treaty made with the Persian Government so long ago as 1882.

The Sultans have been in a difficult position for a good many years. They hold their capital of Maskat, the adjacent town of Matra, one or two other coast towns, and certain points in the interior, but as they possess few troops they find themselves unable to control the roving Beduin who wander at will over most of the State. When the Beduin wanted money they were wont to ride down to Matra, the centre of the date trade, and threaten to sack the town. The late Sultan, who died in 1913, was generally compelled to bribe them to go away. The rising which began in 1913 was a more serious affair. A Pretender, Sheikh Abdullah, seized the inland town of Semail, which stands in a spacious fertile valley where are grown most of the dates for which Maskat is famous. Great Britain has special interests at Maskat, based upon various documents, the chief of which is one drafted in 1891-92. The late Sultan asked us to protect him against the Pretender. We said we would protect his capital and coast, but could not send an expedition into the interior against the elusive Beduin. We sent Indian troops to Maskat.

British Consul: R. E. L. Wingate.

Agency Surgeon: Vacant.


CASPIAN SEA
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Baghdad
LURISTAN
AFGHANISTAN
Birjand
Dizful
Ispahan
KUHISTAN
Yezd
ARABISTAN
Basra
Muhammerah
Kerman
Shiraz
KERMAN
ARABIA
PERSIAN GULF
Bushire
FARS
LARISTAN
Bandar Abbas

The Pirate Coast.

Turning Cape Musandim and entering the Gulf Proper, we pass the Pirate Coast, controlled by the six Trucial Chiefs. The ill-name of this territory has now ceased to have any meaning, but in the early days it had a very real relation to the actual conditions. The pirates were the boldest of their kind, and they did not hesitate to attack on occasion, and not always without success, the Company's ships of war. Large expeditions were fitted out to break their power, with such success that since 1820 no considerable punitive measures have been necessary. The Trucial Chiefs are bound to Great Britain by a series of engagements, beginning with 1806 and ending with the perpetual treaty of 1853 by which they bound themselves to avoid all hostilities at sea, and the subsequent treaty of 1873 by which they undertook to prohibit altogether the traffic in slaves. The relations of the Trucial Chiefs are controlled by the British Resident at Bushire, who visits the Pirate Coast every year on a tour of inspection. The German attempt to obtain a concession from the Sheikh of Shargarh has been mentioned. A more serious question arose in 1912 when a landing party from H. M. S. Fox, searching for contraband arms at Debai, was fired at by the resident Arabs and five men killed and nine wounded. The Sheikh made ample amends to the British Resident, and submitted to a fine. There was at first the suspicion that this *emeute* arose from the spread of pan-Islamism on the coast, studiously fostered from Constantinople, and that it indicated a weakening respect for British authority. But fuller enquiries tended to show that it arose from an unfortunate series of misunderstandings. The commercial importance of the Pirate Coast is increasing through the rise of Debai. Formerly Lingah was the entrepot for this trade, but the exactions of the Belgian Customs officials in the employ of Persia has driven this traffic from Lingah to Debai. The Trucial Chiefs are—Debai, Abu Thabee, Shargah, Ajman, Um-al-Gawain and Ras-el-Kheyma.

Bahrein.

North of the Pirate Coast lies the little Archipelago which forms the chiefship of the Sheikh of Bahrein. Of this group of islands only those of Bahrein and Maharak are of any size, but their importance is out of all proportion to their extent. This is the great centre of the Gulf pearl fishery, which, in a good year, may be worth half a million pounds sterling. The anchorage is wretched, and at certain states of the tide ships have to lie four miles from the shore, which is not even approachable by boats, and passengers, mails and cargo have to be landed on the donkeys for which Bahrein is famous. But this notwithstanding the trade of the port is valued at over a million and a quarter sterling, and the customs revenue, which amounts to some eighty thousand pounds, makes the Sheikh the richest ruler in the Gulf.

Bahrein has passed through more than usually chequered experiences. Not the least formidable of these are the efforts of the Turks to threaten its independence. These took definite form in the third quarter of the last century, when Midhat Pasha, Vali of Basra, occupied the promontory of El Kater, as well as El Katif, over against Bahrein, and converted El Hasa into a district. The war with Russia put an end to these designs, but they were revived and the Turks at El Kater were a menace to Bahrein until the war diverted Turkish activities. The Sheikh by the treaty of 1861 entered into special engagements with the British Government, by whom his rights are guaranteed.

In the neighbourhood of Bahrein is the vast burying ground which has hitherto baffled archæologists. The generally accepted theory is that they are relics of the Phœnicians, who are known to have traded in these waters.

Political Agent, Major C. K. Daly.

Koweit.

In the north-west corner of the Gulf lies the port which has made more stir than any place of similar size in the world. The importance of Koweit lies solely in the fact that it is the one possible Gulf terminus of the Baghdad Railway. This is no new discovery, for when the Euphrates Valley Railway was under discussion, General Chesney selected it under the alternative name of the Grane—so called from the resemblance of the formation of the Bay to a pair of horns—as the sea terminus of the line. Nowhere else would Koweit be called a good or a promising port. The Bay is 20 miles deep and 5 miles broad, but so shallow that heavy expense would have to be incurred to render it suitable for modern ocean-going steamers. It is sheltered from all but the westerly winds, and the clean thriving town is peopled by some 20,000 inhabitants, chiefly dependent on the sea, for the mariners of Koweit are noted for their boldness and hardihood.

The political status of Koweit would baffle the ingenuity of the international jurist to find a definition. Nominally the Sheikh owns allegiance to the Sultan of Turkey, from whom he has accepted the honorary title of Kaimakam, or Local Governor. In practice, he has always been independent. In 1898, the Turks attempted to convert their nominal sovereignty into something more actual; but the Sheikh Mubarak approached the British Government and placed his interests under their special protection. When, however, the German surveyors earmarked Koweit for the terminus of their line, the position of the Sheikh was indirectly attacked. To the north of Koweit there is a deep indentation in the lowlying shore chiefly occupied by the swampy island of Bubyan. Here a long narrow channel runs to Umm Khasa, the Khor Abdulla. It is sometimes held to be an alternative to Koweit as a Gulf Terminus, and with a view to earmarking it, the Turks have established military posts at Umm Khasa and on Bubyan Island. Threatened by domestic feuds, raids by sea, and attack by land, Sheikh Mubarak, with a British backing, has fended off all assaults on his position, and with realisation of the fact that Basra must, in any circumstances, be the commercial terminus of the Baghdad Railway, the importance of Koweit has tended to recede.

Political Agent, Major J. C. More, D.S.O.

Muhammerah.

On the opposite side of the entrance to the Shatt-el-Arab lie the territories of a Sheikh who stands to the Persian Government in much the same relation as does the Sheikh of Koweit to the Government of Turkey—Sheikh Khazzal of Muhammerah. Nominally, he is subject to Teheran, on whose behalf he governs his territories as Governor; in practice he is more like a semi-independent vassal. In personal characteristics, too, Sheikh Khazzal had much in common with Mubarak; he has proved that he possesses many of the qualities of an administrator, and has resisted Persian encroachments on his authority in all directions save one—despite his strong antipathy to the agents of a centralised government, the Persians have installed an officer of their Belgian Customs service at Muhammerah. The town favourably situated near the mouth of the Karun River, has grown in importance since the opening of the Karun River route to trade through the enterprise of Messrs. Lynch Brothers. This route provides the shortest passage to Ispahan and the central tableland, and already competes with the older route by way of Bushire and Shiraz. This importance has grown since the Anglo-Persian Oil Company established refineries at Muhammerah for the oil which they win in the rich fields which they have tapped near Ahwaz. Its importance will be still further accentuated, if the scheme for a railway to Khorremabad by way of Dizful matures. A concession for a road by this route has long been held by a British Company, and surveys for a railway are being made. There is a tacit assurance from the Persian Government that if a practicable scheme is put forward, they will facilitate the work. Such a line, meeting the projected branch from Teheran to Khannikin, would intercept the trade of Central Persia and make Muhammerah the principal outlet for the commerce of the country. Sheikh Khazzal is believed to have formed an excellent working understanding with his brother chief across the water, and as the head of the great Kaab tribe he is no mean power in south-western Persia.

Vice-Consul at Ahwaz, Captain E. G. B. Peel.
Consul for Arabistan (Muhammerah), Asstt. Surgeon C. H. Lincoln.

Basra.

In a sense Basra and Turkish Arabistan can hardly be said to come within the scope of the Frontiers of India, yet they are so indissolubly associated with the politics of the Gulf that they must be considered in relation thereto. Basra is the inevitable sea terminus of the Baghdad Railway. It stands on the Shatt-el-Arab, sixty miles from its mouth, favourably situated to receive the whole water-borne trade of the Tigris and Euphrates Rivers The local traffic is valuable, for the richness of the date groves on either side of the Shatt-el-Arab is indescribable, there is a considerable entrepot traffic, whilst Basra is the port of entry for Baghdad and for the trade with Persia, which follows the caravan route *via* Kermanshah and Hamadan.

When the British expeditionary force seized Basra in the autumn of 1914, the port was one of possibilities only. The bar at the mouth of the river had to be crossed before the deep fairway up the Shatt-el-Arab was reached, and there were no port facilities in Basra itself. The steamers anchored in the stream and all cargo had to be lightered ashore. Some time elapsed before any improvements were effected. Then a new deep-water port, properly equipped with wharves alongside which steamers could anchor and discharge direct was constructed at Makina, a few miles north of Basra. Later great improvements were made in Basra itself. During the war Basra and Makina were scenes of immense activity, for they were the bases of the expeditionary force which from first to last absorbed nine hundred thousand men. Subsequently a railway was constructed from Basra to Nasriyeh, and this was finally prolonged to Bagdad itself. These improvements were however interrupted by the rising in Mesopotamia, which was most active in the Middle Euphrates, in the middle of 1920. The tribesmen cut the railway and all transport was returned to the discarded river route. This interruption was temporary and if the situation is cleared, Basra will become the great port of the Middle East. It will absorb all the trade of Iraq and of Persia, save the small proportion which flows eastwards. During the rising the people of Basra remained aloof. Their natural affinities are with Great Britain and India; all they ask is for an effective administration These conditions are so strong and the position of Basra at the head of the Persian Gulf is of such strategic importance, that even the most convinced advocates of the evacuation of Mesopotamia are equally convinced that it will be necessary to retain the Basra vilayet indefinitely under British control.

The Persian Shore.

The Persian shore presents fewer points of permanent interest. The importance of Bushire is administrative rather than commercial. It is the headquarters of Persian authority, the residence of the British Resident, and the centre of many foreign consuls. It is also the main entrepot for the trade of Shiraz, and competes for that of Ispahan. But the anchorage is wretched and dangerous, the road to Shiraz passes over the notorious kotals which preclude the idea of rail connection, and if ever a railway to the central tableland is opened, the commercial value of Bushire will dwindle to insignificance. Further south lies Lingah, reputed to be the prettiest port on the Persian coast, but its trade is being diverted to Debai on the Pirate Coast. In the narrow channel which forms the entrance to the Gulf from the Arabian Sea is Bunder Abbas. Here we are at the key of the Gulf. Bunder Abbas is of some importance as the outlet for the trade of Kerman and Yezd. It is of still more importance as a possible naval base. To the west of the town between the Island of Kishm and the mainland, lie the Clarence Straits which narrow until they are less than three miles in width, and yet contain abundance of water. Here, according to sound naval opinion, there is the possibility of creating a naval base which would command the Gulf. The great obstacle is the climate, which is one of the worst in the world. On the opposite shore, under the shadow of Cape Musandim, lies another sheltered deep-water anchorage,

Elphinstone's Inlet, where the climate conditions are equally vile. But between these two points there is the possibility of controlling the Gulf just as Gibraltar controls the Mediterranean. For many years Bunder Abbas loomed large in public discussions as the possible warm water port for which Russia was seeking. On the Mekran coast, there is the cable station of Jask, and the possible port of Chahbar. The British Government temporarily occupied Bushire in 1915 in circumstances narrated in Persia (q. v.)

Political Resident in the Persian Gulf, Lt.-Col. A. P. Trevor, C.S.I., C.I.E.

Residency Surgeon at Bushire—Major A. S. M. Peebles, I.M.S.

Consul at Bunder Abbas and Assistant to the Resident, Captain A. W. Fagan.

PERSIA.

The concentration of public attention on the Persian Gulf has been allowed to obscure the frontier importance of Seistan. Yet it has been a serious preoccupation with the Government of India. Seistan lies midway north and south between the point where the frontiers of Russia, Persia and Afghanistan meet at Zulfikar and that where the frontiers of Persia and of our Indian Empire meet on the open sea at Gwattur. It marches on its eastern border with Afghanistan and with Baluchistan, it commands the valley of the Helmand, and with it the road from Herat to Kandahar, and its immense resources as a wheat-producing region have been only partly developed under Persian misrule. It offers to an aggressive rival, an admirable strategic base for future military operations; it is also midway athwart the track of the shortest line which could be built to connect the Trans-Caspian Railway with the Indian Ocean, and if and when the line from Askabad to Meshed were built, the temptation to extend it through Seistan would be strong. Whilst the gaze of the British was concentrated on the North-West Frontier, and to possible lines of advance through Kandahar to Quetta, and through Kabul to Peshawar, there can be little doubt that Russian attention was directed to a more leisurely movement through Seistan, if the day came when she moved her armies against India.

Anglo-Russian Agreement.

Whether with this purpose or not, Russian intrigue was particularly active in Seistan in the early years of the century. Having Russified Khorassan, her agents moved into Seistan and through the agency of the Belgian Customs officials, "scientific missions" and an irritating plague cordon, sought to establish influence, and to stifle the British trade which was gradually being built up by way of Nushki. These efforts died down before the presence of the McMahon mission, which, in pursuance of Treaty rights, was demarcating the boundary between Persia and Afghanistan, with special reference to the distribution of the waters of the Helmand. They finally ceased with the conclusion of the Anglo-Russian Agreement. Since then the international importance of Seistan has waned. Whether on account of the Agreement, which bars the line of advance through Seistan, or because of the discovery of an easier route, we cannot determine, but Russian activities in railway construction were later diverted to the Trans-Persian route, which would take a direct line through Teheran from Baku, and meet the Arabian Sea at Bunder Abbas or Chahbar.

The natural conditions which give to Seistan this strategic importance persist. Meantime British influence is being consolidated through the Seistan trade route. The distance from Quetta to the Seistan border at Killa Robat is 465 miles, most of it dead level, and it has now been provided with fortified posts, dak bungalows, wells, and all facilities for caravan traffic. The railway was pushed out from Spezand, on the Bolan Railway to Nushki, so as to provide a better starting point for the caravans than Quetta. This railway was during the war extended to the Persian border.

NEW AGREEMENTS WITH PERSIA.

The condition of Persia during the war was one of helplessness. At the outset of hostilities German agents, who had carefully prepared the ground, raised the lawless element and spread over a large part of the country. They were expelled by the Russians, when they advanced from Kasvin to the neighbourhood of Baghdad. Later, on the fall of Kut, Turkish troops overran the western provinces; these had to beat a hasty retreat when the victories of General Maude took British arms to Baghdad. On the final collapse of Russia, the Turks again entered the country from the Caucasus, but before they could do much damage the crushing defeat of Turkey put an end to their activities. Simultaneously the efforts of the South Persian Rifles, organised with the co-operation of Great Britain, and of the expedition which passed through Persia to the Black Sea were responsible for restoring some semblance of order. In all these developments the Persian Government took little or no part; it was the sport of events which it could not effectively control or influence.

The cessation of hostilities created a new and perplexing situation in Persia. Thanks to Russian and British aid, that country had escaped with the bulk of her territories intact, but her administration remained weak and ineffective and offered an easy mark to Bolshevist intrigues which were clearly leading towards a war of conquest in Persia. With Russia in a state of chaos, Great Britain was the only country to which Persia could turn for aid, the only great power whose frontiers marched with those of Persia. What is more, open statements of policy had been made of a kind likely to reassure Persian statesmen in regard to the intentions of Great Britain. "We desire Persia to remain neutral during the War," said Lord Curzon in 1918, "and to retain its complete independence after the War." It was natural then that Persia should seek British assistance and the despatch of Sir Percy Cox to Teheran as British Minister, at the end of 1918, was the first step in negotiations of which the fruit was seen in August of the following year when it was announced that two

Railway Position in the Middle East.

agreements had been concluded with Persia. Of these one was political and aimed at binding more closely Anglo-Persian relations and promoting the progress and prosperity of Persia. To these ends Great Britain agreed,

To respect Persian integrity;

To supply experts for Persian administration;

To supply officers and equipment for a Persian force for the maintenance of order;

To provide a loan for these purposes;

To co-operate with the Persian Government in railway construction and other forms of transport.

Both Governments agreed to the appointment of a joint committee to examine and revise the Customs tariff.

The second agreement defined the terms and conditions on which the loan was to be made to Persia. The loan was for£2,000,000 at 7 per cent redeemable in 20 years. It was secured on the revenues and Customs' receipts assigned for the repayment of the 1911 loan and should these be insufficient the Persian Government was to make good the necessary sums from other sources.

The Present Position:—We have given the main points in the Anglo-Persian agreement, because few documents have been more misunderstood. Those who desire to study it in greater detail will find it set out in The Indian Year Book for 1921, page 138 *et seq* It has been explained that most Persians construed it into a guarantee of protection against all external enemies When the British troops in the north-west retired before the Bolsheviks, the Persians had no use for the Agreement and it soon became a dead instrument. It was finally rejected and the advisers who were to have assisted Persia under it withdrew This situation so created was described by Lord Curzon in the House of Lords in terms which are textually reproduced.—

"We had offered by the terms of the Anglo-Persian Agreement to reorganize the finances of Persia, and to enable her to create a national Army and proceed with the development of her means of communication and her internal resources. For this purpose the British Government had been willing to make a loan of £2,000,000 to the Persian Government. No more disinterested and single-minded attempt was ever made by a Western Power to re-establish the existence and secure the prosperity of an Eastern country. There were then, however, already obstacles in the path. There was the chronic instability of Persian Governments; the unwillingness of successive Ministries to summon the Mejliss: the atmosphere of incurable intrigue that prevailed among the Teheran politicians. The withdrawal of British forces from Kasvin and the neighbourhood was attended by an inevitable weakening of the influence we had been able to exercise at Teheran. Lastly, at that period the Persian Government was beginning to be afraid of Soviet Russia. At the same time that her Ministers were endeavouring to extricate themselves from or to repudiate the Anglo-Persian Agreement, they were negotiating a new treaty with the Soviet authorities at Moscow, which was signed last February.

"It was in the midst of this perplexing jumble of events that a Soviet Minister appeared at Teheran in April last and pursued the familiar Bolshevist methods—the exercise of ceaseless political propaganda and promises of money to those whose support he solicited, whilst always in the background there had been the presence of a Russian force

"It seemed to him that in the attitude that it had adopted towards the Anglo-Persian Agreement, the Persian Government had in the exercise of what was now called self-determination made its own choice. It had deliberately rejected the chance of recovering its fortunes with British aid It had preferred to fall back on the familiar game of playing off one foreign country against another, and in a last resort it was not unwilling to accept the caresses of the Soviet Government caresses which usually ended in strangling those to whom they were applied

"With regard to the present position of the South Persian Rifles, its present strength was about 6,000. It was the only stable element in the centre and south of Persia to preserve order and keep open the trade routes and for rendering invaluable services to the Persian Government. Up till March 31 of this year these forces were financed by the British and Indian Governments. They then withdrew their contribution. When the contribution was exhausted the forces would be disbanded. The Persian Government had expressed the warmest desire to take the force over, but they wanted to dispense with the British Officers. Unless the Persian Government saw wisdom in the interval, he could see that the trade routes would be again insecure and the lives of those who were engaged in business or otherwise would become precarious and there would be a return to the old conditions of anarchy and disorder."

The South Persian Rifles were disbanded in accordance with the policy here announced.

Sir Percy Lorraine assumed office as British Minister at Teheran in December 1921.

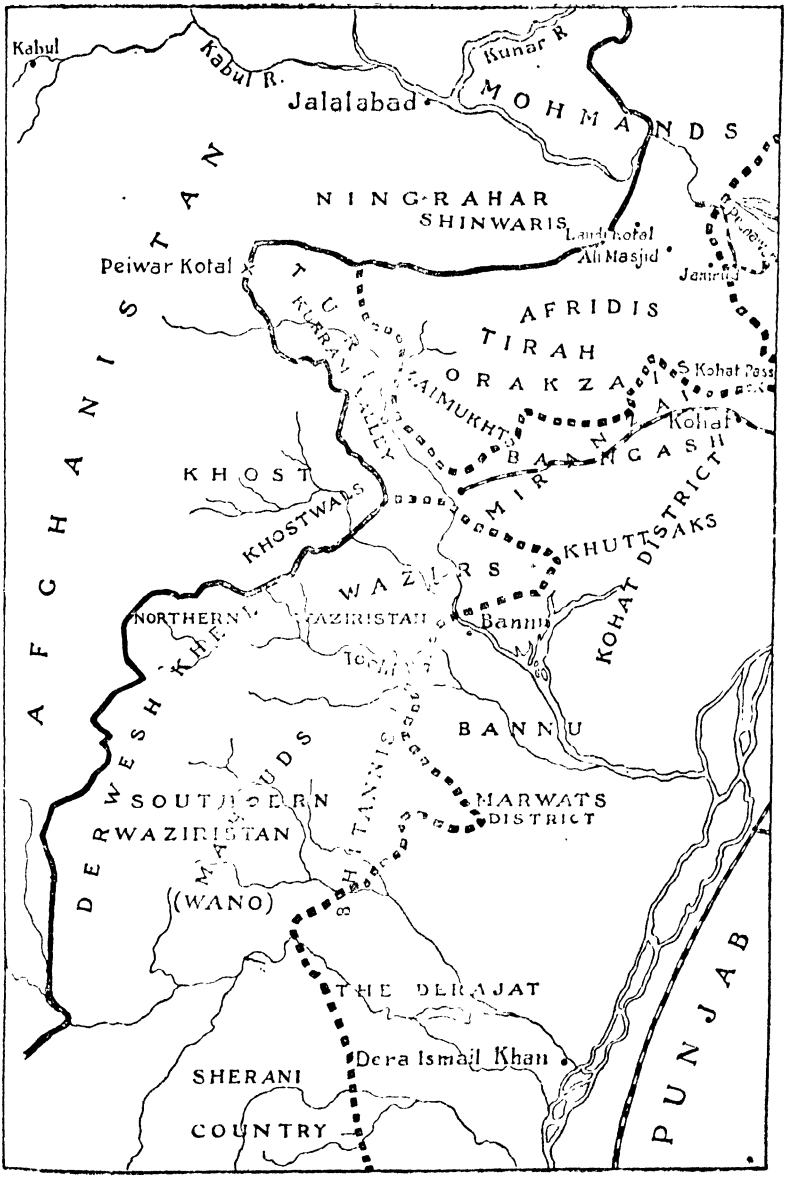
H. B. M.'s Consul General and Agent of the Government of India in Khorasan:—Lieut.-Colonel F. B. Prideaux, C.S.I., C.I.E.

H. B. M.'s Consul in Sistan and Kain:—Captain T. C. W. Fowle

Medical Officer and Vice-Consul:—Major R. F. D. MacGregor.

THE INDEPENDENT TERRITORY.

There yet remains a small part of British India where the King's writ does not run. Under what is called the Durand Agreement with the Amir of Afghanistan, the boundary between India and Afghanistan was settled, and it was delimited in 1903 except for a small section which was delimited after the Afghan War in 1919. But the Government of India have never occupied up to the border. Between the administered territory and the Durand line


Kabul
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NINGRAHAR
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Peiwar Kotal
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AFRIDIS
TIRAH
ORAKZAIS
Kohat Pass
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KURRAM VALLEY
KURRAM
MAIMUKHTS
BANGASH
MIRANZAI
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KHOSTWALS
KHUTTAKS
KOHAT DISTRICT
WAZIRS
NORTHERN WAZIRISTAN
Bannu
Tochi R.
BANNU
DERWESHKHEL
SOUTHERN WAZIRISTAN
MARWATS
DISTRICT
MAHSUDS
BHITANNIS
(WANO)
THE DERAJAT
Dera Ismail Khan
SHERANI
COUNTRY
PUNJAB
AFGHANISTAN

there lies a belt of territory of varying width, extending from the Gomal Pass in the south, to Kashmir in the north: this is generically known as the Independent Territory. Its future is the keynote of the interminable discussions of frontier policy for nearly half a century.

This is a country of deep valleys and secluded glens, which nature has fenced in with almost inaccessible mountains. It is peopled with wild tribes of mysterious origin, in whom Afghan, Tartar, Turkoman, Persian, Indian, Arab and Jewish intermingle. They had lived their own lives for centuries, with little intercourse even amongst themselves, and as Sir Valentine Chirol truly said "the only bond that ever could unite them in common action was the bond of Islam." It is impossible to understand the Frontier problem unless two facts are steadily borne in mind. The strongest sentiment amongst these strange people is the desire to be left alone. They value their independence much more than their lives. The other factor is that the country does not suffice even in good years to maintain the population. They must find the means of subsistence outside, either in trade, by service in the Indian Army or in the Frontier Militia; or else in the outlet which hill-men all the world over have utilised from time immemorial, the raiding of the wealthier and more peaceful population of the Plains.

Frontier Policy.

The policy of the Government of India toward the Independent Territory has ebbed and flowed in a remarkable degree. It has fluctuated between the Forward School, which would occupy the frontier up to the confines of Afghanistan, and the school of Masterly Inactivity, which would leave the tribesmen entirely to their own resources, punishing them only when they raided British territory. Behind both the policies lay the menace of a Russian invasion, and that coloured our frontier policy until the Anglo-Russian Agreement. This induced what was called Hit and Retire tactics; in the half century which ended in 1897 there were nearly a score of punitive expeditions, each one of which left behind a legacy of distrust, and which brought no permanent improvement in its train. The fruit of the suspicion thus engendered was seen in 1897. Then the whole Frontier, from the Malakand to the Goma., was ablaze. The extent of this rising and the magnitude of the military measures which were taken to meet it compelled a consideration of the whole position. The broad outlines of the new policy were laid down in a despatch from the Secretary of State for India, which prescribed for the Government the "limitation of your interference with the tribes, so as to avoid the extension of administrative control over tribal territory." It fell to Lord Curzon to give effect to this policy. The main foundations of his action were to exercise over the tribes the political influence requisite to secure our imperial interests, to pay them subsidies for the performance of specific duties, but to respect their tribal independence and leave them, as far as possible, free to govern themselves according to their own traditions and to follow their own inherited habits of life without let or hindrance.

New Province.

As a first step Lord Curzon took the control of the tribes under the direct supervision of the Government of India. Up to this point they had been in charge of the Government of the Punjab, a province whose head is busied with many other concerns. Lord Curzon created in 1901, the North-West Frontier Province, and placed it in charge of a Chief Commissioner with an intimate frontier experience, directly subordinate to the Government of India. This was a revival of a scheme prepared by Lord Lytton in 1877, and often considered afterwards, but which had slipped for lack of driving power. Next Lord Curzon withdrew the regular troops so far as possible from the advanced posts, and placed these fortalices in charge of tribal levies, officered by a handful of British officers. The most successful of these is the Khyber Rifles, which steadfastly kept the peace of that historic Pass until 1919. At the same time the regular troops were cantoned in places whence they could quickly move to any danger point, and these bases were connected with the Indian Railway system. In pursuance of this policy frontier railways were run out to Dargai, and a narrow-gauge line, since converted to the broad-gauge, was constructed from Kushalgarh to Kohat at the entrance of the Kohat Pass, and to Thal at the mouth of the Kurram Valley. These railways have been completed by lines to Tonk and Bannu. By this means the striking power of the regula forces was greatly increased. Nor was the policy of economic development neglected. The railways gave a powerful stimulus to trade, and the Lower Swat Canal converted factious tribesmen into successful agriculturists. This policy of economic development is receiving a great development through the completion of the Upper Swat Canal (*q. v.* Irrigation). Now it is completed there are other works awaiting attention. For many this policy was completely justified by results.

A New Policy.

It saved us from serious complications for nearly twenty years, although the position could never be said to be entirely satisfactory particularly in Waziristan, peopled by the most reckless raiders on the whole border-line with a bolt hole into Afghanistan when pressed from the British side. It endured throughout the war and did not break down until the Amir of Afghanistan sought refuge from his internal troubles in a jehad against India. In this insane enterprise the Afghans placed less reliance in their regular troops, which have never offered more than a contemptible resistance to the British forces, than in the armed tribesmen. In this they were justified, for the most serious fighting was with the tribesmen. The tribal levies collapsed with almost universal swiftness. The Southern Waziristan Militia broke and there was serious trouble throughout the Zhob district. The Atridis, our most serious enemies in 1897, and the most powerful of the tribes on the North-West Frontier, remained fairly quiet throughout the actual hostilities with Afghanistan, but later, it was necessary to take measures against a leading malcontent and destroy his fort at Chora. But the Mahsuds and the Waziris

broke into open hostilities. Their country lies within the belt bounded by the Durand Line and the Afghan frontier on the west, and by the districts of Bannu and Dehra Ismail Khan on the east. Amongst them the Afghan emissaries were particularly active and as they could put in the field some 30,000 warriors, 75 per cent. armed with modern weapons of precision, they constituted formidable adversaries. They refused to make peace even when the Afghans caved in. They rejected our terms and active measures were taken against them. The earlier history of these measures is described in the Indian Year Book of 1920; they were continued until May of 1920. The fighting was the most severe in the history of the Frontier. The Mahsuds fought with great tenacity. Their shooting was amazingly good; their tactics were admirable, for amongst their ranks were many men trained either in the Militia or in the Indian Army; and more than once they came within measurable distance of considerable success. They were assisted by the fact that the best trained troops in the Indian Army were still overseas and younger soldiers were opposed to them. But their very tenacity and bravery were their own undoing; their losses were the heaviest in the long history of the Borderland and when the Mahsuds made their complete submission in September 1921 they were more severely chastened than at any time during their career.

The most formidable legacy of the war was the demand for a different frontier policy. It became evident that the old regime of levy posts and tribal militia backed up by heavy subsidies to the border tribes had come to an end. The exact policy which will take its place has yet to be determined. But it is certain that it will need large regular forces to protect the Border, supported by an adequate system of roads and railways. Further, there arose from the bitter fighting in Waziristan the need for a definite policy in that disturbed area. In the opinion of competent frontier officers there are only two courses; one is to enclose the country in a ring fence, the other to hold permanently strong places which will dominate the country and keep its turbulent people in subjection. The latter has in effect been decided upon. Lord Chelmsford indicated the broad outlines of this policy when in his opening speech at the last meeting of the Imperial Legislative Council he declared that it had been decided to retain commanding posts in Waziristan and open up the country by roads—on the principle of Wade's pacification of the Scottish Highlands; and to extend the railway from Jamrud through the Khyber Pass to the Afghan frontier.

AFGHANISTAN.

The relations of Afghanistan with the Indian Empire were dominated by one main consideration—the relation of Afghanistan to a Russian invasion of India. All other considerations were of secondary importance. For nearly three-quarters of a century the attitude of Great Britain toward successive Amirs has been dictated by this one factor. It was in order to prevent Afghanistan from coming under the influence of Russia that the first Afghan War of 1838 was fought—the most melancholy episode in Indian frontier history. It was because a Russian envoy was received at Kabul whilst the British representative was turned back at Ali Masjid that the Afghan War of 1878 was waged. After that the whole end of British policy toward Afghanistan was to build up a strong independent State, friendly to Britain, which would act as a buffer against Russia, and so to order our frontier policy that we should be in a position to move large forces up, if necessary, to support the Afghans in resisting aggression.

Gates to India.

A knowledge of the trans-frontier geography of India brought home to her administrators the conviction that there were only two main gates to India—through Afghanistan, the historic route to India, along which successive invasions have poured, and by way of Seistan. It was the purpose of British policy to close them, and of Russia to endeavour to keep them at any rate half open. To this end having pushed her trans-Persian railway to Samarkand. Russia thrust a military line from Merv to the Kushklinsky Post, where railway material is collected for its immediate prolongation to Herat. Later, she connected the trans-Siberian railway with the tran-Caucasian system, by the Orenburg-Tashkent line, thus bringing Central Asia into direct touch with her European magazines. Nor has Great Britain been idle. A great military station has been created at Quetta. This is connected with the Indian railway system by lines of railway which climb to the Quetta Plateau by the Bolan Pass and through the Chapper Rift, lines which rank amongst the most picturesque and daring in the world. From Quetta the line has been carried by the Khojak tunnel through the Khwaja Amran Range, until it leads out to the Afghan Border at New Chaman, where it opens on the route to Kandahar. The material is stocked at New Chaman which would enable the line to be carried to Kandahar in sixty days. In view of the same menace the whole of Baluchistan has been brought under British control. Quetta is now one of the great strategical positions of the world, and nothing has been left undone which modern military science can achieve to add to its natural strength. In the opinion of many military authorities it firmly closes the western gate to India, either by way of Kandahar, or the direct route through Seistan.

Further east the Indian railway system has been carried to Jamrud and is being pushed up to the Khyber Pass. A first class military road sometimes double, sometimes treble, threads the Pass to our advanced post at Landi Kotal, and then descends until it meets the Afghan frontier at Landi Khana. Later, a commencement was made with the Loi Shilman Railway, which, starting from Peshawar, was designed to penetrate the Mullagori country and provide an alternative advance to the Khyber for the movement of British troops for the defence of Kabul. For unexplained reasons, this line was suddenly stopped and is now

thrust in the air. In this wise the two Powers prepared for the great conflict which was to be fought on the Kandahar-Ghazni-Kabul line.

Relations with India.

Between the advanced posts on either side stands the Kingdom of Afghanistan. The end of British policy has been to make it strong and friendly. In the first particular it has largely succeeded. When the late Abdurrahaman was invited to ascend the throne, as the only means of escape from the tangle of 1879, none realised his great qualities. Previously the Amir of Afghanistan had been the chief of a confederacy of clans. Abdurrahaman made himself master in his own kingdom. By means into which it is not well closely to enter, he beat down opposition until none dared lift a hand against him. Aided by a British subsidy of twelve lakhs of rupees a year, increased to eighteen by the Durand Agreement of 1893, and subsequently to over 20 lakhs, he established a strong standing army and set up arsenals under foreign supervision to furnish it with arms and ammunition. Step by step his position was regularised. The Anglo-Russian Boundary Commission,—which nearly precipitated war over the Penjdeh episode in 1885,—determined the northern boundaries. The Pamirs Agreement delimited the borders amid those snowy heights. The Durand Agreement settled the border on the British side, except for a small section to the west of the Khyber which remained a fruitful source of trouble between Afghanistan and ourselves until 1919, when the Afghan claims and action upon the undemarcated section led to war. That section was finally surveyed and the frontier determined shortly after the conclusion of peace with Afghanistan. Finally the McMahon award closed the old feud with Persia over the distribution of the waters of the Helmand in Seistan. It was estimated by competent authorities that about the time of Abdurrahaman's death, Afghanistan was in a position to place in the field, in the event of war, one hundred thousand well-armed regular and irregular troops, together with two hundred thousand tribal levies, and to leave fifty thousand regulars and irregulars and a hundred thousand levies to maintain order in Kabul and the provinces. But if Afghanistan were made strong, it was not made friendly. Abdurrahaman Khan distrusted British policy up to the day of his death. All that can be said is that he distrusted it less than he distrusted Russia, and if the occasion had arisen for him to make a choice, he would have opposed a Russian advance with all the force at his disposal. He closed his country absolutely against all foreigners, except those who were necessary for the supervision of his arsenals and factories. He refused to accept a British Resident, on the ground that he could not protect him, and British affairs were entrusted to an Indian agent, who was in a most equivocal position. At the same time he repeatedly pressed for the right to pass by the Government of India and to establish his own representative at the Court of St. James.

Afghanistan and the War:—These relations were markedly improved during the reign of His Majesty the Amir Habibullah Khan. It used to be one of the trite sayings of the Frontier that the system which Abdurrahman Khan had built up would perish with him, for none was capable of maintaining it. Habibullah Khan more than maintained it. He visited India soon after his accession and acquired a vivid knowledge of the power and resources of the Empire. He strengthened and consolidated his authority in Afghanistan itself. At the outset of the war he made a declaration of his complete neutrality. It is believed—a considerable reticence is preserved over our relations with Afghanistan—that he warned the Government of India that he might be forced into many equivocal acts, but they must trust him; certainly his reception of Turkish, Austrian and German "missions" at Kabul, at a time when British representatives were severely excluded, was open to grave misconstruction. But a fuller knowledge induced the belief that the Amir was in a position of no little difficulty. He had to compromise with the fanatical and anti-British elements amongst his own people, inflamed by the Turkish preaching of a jehad, or holy Islamic war. But he committed no overact of hostility; as soon as it was safe to do so he turned the members of these missions out of the kingdom. At the end of the war his policy was completely justified; he had kept Afghanistan out of the war, he had adhered to the winning side; his authority in the kingdom and in Central Asia was at its zenith.

Murder of the Amir:—It is believed that if he had lived Habibullah Khan would have used this authority for a progressive policy in Afghanistan, by opening up communications and extending his engagements with India. He was courted by the representatives of Persia and the Central Asian States as the possible rallying centre of a Central Asian Islamic confederation. At this moment he was assassinated on the 20th February 1919. The circumstances surrounding his murder have never been fully explained; but there is strong ground for the belief that it was promoted by the reactionaries who had harassed him all his reign. These realised that with his vindication by the war their time of reckoning had come: they anticipated it by suborning one of his aides to murder him in his sleep. His brother, Nasrullah Khan, the nominee of the fanatical element, was proclaimed Amir at Jelalabad in his stead, but public opinion in Afghanistan revolted at the idea of the brother seizing power over the corpse of the murdered man. His sons, Hayat and Amanullah, were not disposed to waive their heritage. Amanullah was at Kabul, controlling the treasury and the arsenal and supported by the Army. Nasrullah found it impossible to make head against him and withdrew. The new Amir, Amanullah, at once communicated his accession to the Government of India and proclaimed his desire to adhere to the traditional policy of friendship. But his difficulties at once commenced; he had to deal with the war party in Afghanistan; he was confronted with the dissatisfaction arising from the manner in which the murderers of Habibullah had been dealt with; the fanatical element was exasperated by the imprisonment of Nasrullah; and the Army was so incensed that it had to be removed from Kabul and given occupa-

tion to divert its thoughts. A further element of complexity was introduced by the political situation in India. The agitation against the Rowlatt Act was at its height. The disturbances in the Punjab and Gujarat had taken place. Afghan agents in India, of whom the most prominent was Ghulam Hyder Khan, the Afghan postmaster at Peshawar, flooded Afghanistan with exaggerated accounts of the Indian unrest. The result of all this was to convince the Amir that the real solution of his difficulties was to unite all the disturbing elements in a war with India. On the 25th April his troops were set in motion and simultaneously a stream of anti-British propaganda commenced to flow from Kabul and open intrigue was started with the Frontier tribes, on whom the Afghans placed their chief reliance

Speedy Defeat:—The war caught the Army in India in the throes of demobilisation and with a large proportion of the seasoned troops on service abroad. Nevertheless the regular Afghan Army was rapidly dealt with Strong British forces moved up the Khyber and seized Dacca. Jelalabad was repeatedly bombed from the air and also Kabul Nothing but a shortage of mechanical transport prevented the British forces from seizing Jelalabad. In ten days the Afghans were severely defeated. On the 14th May they asked for an Armistice. With the usual Afghan spirit of haggling, they tried to water down the conditions of the armistice, but as they were met with an uncompromising emphasis of the situation they despatched representatives to a conference at Rawalpindi on the 26th July. On the 8th August a Treaty of Peace was signed which ran as follows:

ARTICLE 1.

From the date of the signing of this Treaty there shall be peace between the British Government, on the one part, and the Government of Afghanistan on the other.

ARTICLE 2.

In view of the circumstances which have brought about the present war between the British Government and the Government of Afghanistan, the British Government to mark their displeasure, withdraw the privilege enjoyed by former Amirs of importing arms, ammunition or warlike munitions through India to Afghanistan.

ARTICLE 3.

The arrears of the late Amir's subsidy are furthermore confiscated, and no subsidy is granted to the present Amir.

ARTICLE 4.

At the same time, the British Government are desirous of the re-establishment of the old friendship that has so long existed between Afghanistan and Great Britain, provided they have guarantees that the Afghan Government are, on their part, sincerely anxious to regain the friendship of the British Government. The British Government are prepared, therefore, provided the Afghan Government prove this by their acts and conduct, to receive another Afghan mission after six months for the discussion and settlement of matters of common interest to the two Governments and the re-establishment of the old friendship on a satisfactory basis.

ARTICLE 5.

The Afghan Government accept the Indo-Afghan frontier accepted by the late Amir. They further agree to the early demarcation by a British Commission of the undemarcated portion of the line west of the Khyber, where the resent Afghan aggression took place, and to accept such boundary as the British Commission may lay down. The British troops on this side will remain in their present positions until such demarcation has been effected.

At the same time the Afghan delegates were given a letter which officially recognised the freedom of Afghan foreign relations from British control. The changes brought about in the Middle East by the war had made it difficult for Great British to advise Afghanistan regarding her external affairs, unless such advice was desired. It was therefore thought better to terminate an agreement which had not in effect been very scrupulously observed even by the Amir's predecessors.

Post War Relations:— It will be seen that under this Treaty the way was paved for a fresh engagement six months afterwards During the hot weather of 1920 there were prolonged discussions at Mussoorie between Afghan Representatives and British officials under Sir Henry Dobbs These were private, but it is believed that a complete agreement was reached Certainly after an interchange of Notes which revealed no major point of difference it was agreed that a British Mission should proceed to Kabul to arrange a definite treaty of peace. This Mission crossed the Border in January 1921 and entered Kabul But no Treaty was signed until November of that year Nor is there any mystery as to the reasons for these delays even after the preliminary discussions had been completed; they are set out in a long Note to the Soviet Government which Lord Curzon published in September 1921 In this Note Lord Curzon pointed out that whilst under the Trade Agreement of March 16 the Soviet Government had pledged itself not to intrigue against the British Government, a violent anti-British propaganda had been carried on in the Near and Middle East The specific allegations concerning Afghanistan were embodied in the following paragraph:—

"Intense activity in Afghanistan aimed at imperilling the British power in India Among other things the Soviet has promised Afghanistan a subsidy of £100,000 a year, has sought to establish a bomb factory on the borders of India, and has directed Jemal Pasha's tampering with the tribesmen on the frontier."

The Russo-Afghan Treaty to which Lord Curzon referred, was signed on February 28th, 1921, at which time the Dobbs Mission was actually in Kabul It was the stumbling block to the negotiations. However after many alarums and excursions, the Treaty of Peace was signed in November and published in India. The main points in the Treaty are set out in the following communique:—

"Satisfactory written assurances that no Russian Consulates will be permitted in the Jalalabad, Ghazni and Kandahar areas having been received from the Afghan Government, a Treaty of Friendship with Afghanistan was signed in Kabul.

"Under the Treaty, which though subject to ratification is immediately operative, Great Britain reaffirms her recognition of Afghanistan's *complete independence*, and there is to be an interchange of Ministers in London and Kabul, and of Consuls in India and Afghanistan Afghanistan accepts the existing Anglo-Afghan frontier, with a slight re-alignment of the boundary demarcated by the British Commission in the autumn of 1919; and misunderstandings between the two Governments over the tribes on either side of the border having been removed, each Government engages to apprise the other beforehand of any major operations it may find it necessary to institute for the maintenance of order near the frontier. Subject to the continuance of friendliness and the provisions of any general Arms Traffic Convention that may hereafter come into force the privilege formerly enjoyed by the Afghan Government of importing munitions of war through India is restored, a rebate of customs duty (with a small reduction to cover registration expenses) is granted, subject to the usual conditions regarding goods in transit, on goods that pass through India from the ports into Afghanistan; goods imported by the Afghan Government for the public service are exempt from all duty. Provision is made in the Treaty for the conclusion of separate trade and postal conventions."

The main points of the Treaty are as follows:—

THE ANGLO-AFGHAN TREATY.

ARTICLE I.

The British Government and the Government of Afghanistan mutually certify and respect each with regard to the other all rights of internal and external independence.

ARTICLE II.

The two High Contracting Parties mutually accept the Indo-Afghan Frontier as accepted by the Afghan Government under Article V of the treaty concluded at Rawalpindi on the 8th August 1919, corresponding to the 11th Zipada, 1337 Hijra, and also the boundary west of the Khyber laid down by the British Commission in the months of August and September 1919, pursuant to the said Article, and shown on the map attached to this treaty by a black chain line, subject only to the re-alignment set forth in Schedule I annexed which has been agreed upon in order to include within the boundaries of Afghanistan the place known as Tor Kham, and the whole bed of the Kabul river between Shilman Khwala Banda and Palosai and which is shown on the said map by a red chain line. The British Government agrees that the Afghan authorities shall be permitted to draw water in reasonable quantities through a pipe which shall be provided by the British Government from Landi Khana for the use of Afghan subjects at Tor Kham, and the Government of Afghanistan agrees that British officers and tribesmen living on the British side of the boundary shall be permitted without let or hindrance to use the aforesaid portion of the Kabul river for purposes of navigation and that all existing rights of irrigation from the aforesaid portion of the river shall be continued to British subjects.

ARTICLE III.

The British Government agrees that a Minister from His Majesty the Amir of Afghanistan shall be received at the Royal Court of London like the Envoys of all other Powers and to permit the establishment of an Afghan Legation in London, and the Government of Afghanistan likewise agrees to receive in Kabul a Minister from His Britannic Majesty the Emperor of India and to permit the establishment of a British Legation at Kabul.

Each party shall have the right of appointing a Military Attache to its Legation.

ARTICLE IV.

The Government of Afghanistan agrees to the establishment of British Consulates at Kandahar and Jalalabad, and the British Government agrees to the establishment of an Afghan Consul-General at the headquarters of the Government of India and three Afghan Consulates at Calcutta, Karachi and Bombay. In the event of the Afghan Government desiring at any time to appoint Consular officers in any British territories other than India, a separate agreement shall be drawn up to provide for such appointments, if they are approved by the British Government.

ARTICLE VI.

As it is for the benefit of the British Government and the Government of Afghanistan that the Government of Afghanistan shall be strong and prosperous, the Government of Great Britain agrees that whatever quantity of material is required for the strength and welfare of Afghanistan, such as all kinds of factory machinery, engines and materials and instruments for telegraph telephones, &c., which Afghanistan may be able to buy from Great Britain or the British dominions or from other countries of the world, shall ordinarily be imported without let or hindrance by Afghanistan into its own territories from the ports of the British Isles and British India. Similarly the Government of Afghanistan agrees that every kind of goods, the export of which is not contrary to the internal laws of the Government of Afghanistan and which may in its judgment be in excess of the internal needs and requirements of Afghanistan and is required by the British Government, can be purchased and exported to India with the permission of the Government of Afghanistan. With regard to arms and munitions, the British Government agrees that for so long as it is assured that the intentions of the Government of Afghanistan are friendly and that there is no immediate danger to India to be feared from their importation into Afghanistan, such importation shall be permitted without let or hindrance. If, however, the Arms Traffic Convention is ratified by the

Great Powers of the world and comes into force, the right of importation of arms and munitions by the Afghan Government shall be subject to the proviso that the Afghan Government shall first have signed the Arms Traffic Convention and that such importation shall only be made in accordance with the provisions of that Convention. Should the Arms Traffic Convention not be ratified or lapse, the Afghan Government can, subject to the above-mentioned assurance, import from time to time into its own territory the arms and munitions mentioned above through the ports of the British Isles and British India.

ARTICLE VII.

No Customs duties shall be levied at British Indian ports on goods imported under the provisions of Article VI on behalf of the Government of Afghanistan, for immediate transport to Afghanistan, provided that a certificate signed by such Afghan authority or representative as may from time to time be determined by the two Governments shall be presented at the time of importation to the Chief Customs Officer at the port of import setting forth that the goods in question are the property of the Government of Afghanistan and are being sent under its orders to Afghanistan

The British Government agrees to the grant in respect of all goods imported into India at British ports for re-export to Afghanistan and exported to Afghanistan by routes to be agreed upon between the two Governments of a rebate at the time and place of export of the full amount of Customs duty, levied upon such goods, subject to a deduction of not more than one-eighth of such duty as recompense for the work of Customs registration, and provided that such goods shall be transported through India in sealed packages which shall not be opened or subdivided before their export from India.

The British Government declares that it has no present intention of levying Customs duty on goods or livestock of Afghan origin or manufacture, imported by land or by river into India or exported from Afghanistan to other countries of the world through India and the import of which into India is not prohibited by law. In the event, however, of the British Government deciding in the future to levy Customs duties on goods and livestock imported into India by land or by river from neighbouring States it will, if convenient, levy such duties on imports imported from Afghanistan. But in that event the British Government agrees that it will not levy higher duties on imports from Afghanistan than those levied on imports from such neighbouring States. Nothing in this Article shall prevent levy on imports from Afghanistan of the present Khyber tolls and of octroi in any town of India in which octroi is or may be hereafter levied, provided that there shall be no enhancement of the present rate of the Khyber tolls.

ARTICLE VIII.

The British Government agrees to the establishment of trading agencies by the Afghan Government at Peshawar, Quetta and Parachinar, provided that the personnel and the property of the said agencies shall be subject to the operations of all British laws and orders and to the jurisdiction of British Courts; and that they shall not be recognised by the British authorities as having any official or privileged position.

ARTICLE X.

The two High Contracting Parties agree to afford facilities of every description for the exchange of postal matter between their two countries, provided that neither shall be authorised to establish Post Offices within the territory of the other. In order to give effect to this Article a separate Postal Convention shall be concluded, for the preparation of which such number of special officers as the Afghan Government may appoint shall meet the officers of the British Government and consult with them.

ARTICLE XI.

The two High Contracting Parties having mutually satisfied themselves each regarding the goodwill of the other, and especially regarding their benevolent intentions towards the tribes residing closeto their respective boundaries hereby undertake each to inform the other in future of any military operations of major importance which may appear necessary for the maintenance of order among the frontier tribes residing within their respective spheres before the commencement of such operations.

ARTICLE XII.

The two High Contracting Parties agree that representatives of the British and Afghan Governments shall be appointed to discuss the conclusion of a separate Trade Convention to deal with measures necessary to carry out the provision of Article IX of this treaty and with any other matter relating to trade, the settlement of which may seem desirable in the interests of two High Contracting Parties. Until such a Convention is signed commercial relations shall be continued between the two countries on their present basis.

ARTICLE XIV.

The provisions of this treaty shall come into force from the date of its signature, and shall remain in force for three years from that date. In case neither of the High Contracting Parties should have notified twelve months before the expiration of the said three years the intention to terminate it, it shall remain binding until the expiration of one year from the day on which either of the High Contracting Parties shall have denounced it. This treaty shall come into force on signature by the delegations of the two High Contracting Parties and the two ratified copies of it shall be exchanged at Kabul within 2½ months of signature.

SCHEDULE I.

(Referred to in Article II.)

In the nulla-bed running from Landi Khana to Painda Khak Post, the Afghan frontier has been advanced approximately 700 yards, and the Tor Kham ridge, including Shamsa Kandao and Shamsa Kandao Sar, is comprised in Afghan territory. Further, the Afghan frontier has been advanced between the point where the present boundary joins the Kabul river and Palosai from the centre of the river to the right bank.

N.B.—This frontier readjustment was carried out in December 1921.

TIBET.

Recent British policy in Tibet is really another phase in the long-drawn-out duel between Great Britain and Russia in Central Asia. The earliest efforts to establish communication with that country were not, of course, inspired by this apprehension. When in 1774 Warren Hastings despatched Bogle on a mission to the Tashi-Lama of Shigatse,—the spiritual equal, if not superior, of the Dalai Lama of Lhasa—his desire was to establish facilities for trade, to open up friendly relations with a Power which was giving us trouble on the frontier, and gradually to pave the way to a good understanding between the two countries. After Warren Hasting's departure from India the subject slept, and the last Englishman to visit Lhasa, until the Younghusband Expedition of 1904, was the unofficial Manning. In 1885, under the inspiration of Colman Macaulay, of the Bengal Civil Service, a further attempt was made to get into touch with the Tibetans, but it was abandoned in deference to the opposition of the Chinese, whose suzerainty over Tibet was recognised, and to whose views until the war with Japan, British statesmen were inclined to pay excessive deference. But the position on the Tibetan frontier continued to be most unsatisfactory. The Tibetans were aggressive and obstructive, and with a view to putting an end to an intolerable situation, a Convention was negotiated between Great Britain and China in 1890. This laid down the boundary between Sikkim and Tibet, it admitted a British protectorate over Sikkim, and paved the way for arrangements for the conduct of trade across the Sikkim-Tibet frontier. These supplementary arrangements provided for the opening of a trade mart at Yatung, on the Tibetan side of the frontier, to which British subjects should have the right of free access, and where there should be no restrictions on trade. The agreement proved useless in practice, because the Tibetans refused to recognise it, and despite their established suzerainty, the Chinese Government were unable to secure respect for it.

Russian Intervention.

This was the position when in 1899 Lord Curzon, Viceroy of India, endeavoured to get into direct touch with the Tibetan authorities. Three letters which he addressed to the Dalai Lama were returned unopened, at a time when the Dalai Lama was in direct intercourse with the Tsar of Russia. His emissary was a Siberian Dorjieff, who had established a remarkable ascendancy in the counsels of the Dalai Lama. After a few years' residence at Lhasa Dorjieff went to Russia on a confidential mission in 1899. At the end of 1900 he returned to Russia at the head of a Tibetan mission, of which the head was officially described in Russia as "the senior Tsanite Khomba attached to the Dalai Lama of Tibet." This mission arrived at Odessa in October 1900, and was received in audience by the Tsar at Livadia. Dorjieff returned to Lhasa to report progress, and in 1901 was at St. Petersburg with a Tibetan mission, where as bearers of an autograph letter from the Dalai Lama they were received by the Tsar at Peterhoff. They were escorted home through Central Asia by a Russian force to which several Intelligence Officers were attached. At the time it was rumoured that Dorjieff had, on behalf of the Dalai Lama, concluded a treaty with Russia, which virtually placed Tibet under the protectorate of Russia. This rumour was afterwards officially contradicted by the Russian Government.

The Expedition of 1904.

In view of these conditions the Government of India, treating the idea of Chinese suzerainty over Tibet as a constitutional fiction, proposed in 1903 to despatch a mission, with an armed escort, to Lhasa to discuss the outstanding questions with the Tibetan authorities on the spot. To this the Home Government could not assent, but agreed, in conjunction with the Chinese Government, to a joint meeting at Khamba Jong, on the Tibetan side of the frontier. Sir Francis Younghusband was the British representative, but after months of delay it was ascertained that the Tibetans had no intention of committing themselves. It was therefore agreed that the mission, with a strong escort, should move to Gyantse. On the way the Tibetans developed marked hostility, and there was fighting at Tuna, and several sharp encounters in and around Gyantse. It was therefore decided that the mission should advance to Lhasa, and on August 3rd, 1904, Lhasa was reached. There Sir Francis Younghusband negotiated a convention by which the Tibetans agreed to respect the Chinese Convention of 1890; to open trade marts at Gyantse, Gartok and Yatung; to pay an indemnity of £500,000 (seventy-five lakhs of rupees); the British to remain in occupation of the Chumbi Valley until this indemnity was paid off at the rate of a lakh of rupees a year. In a separate instrument the Tibetans agreed that the British Trade Agent at Gyantse should have the right to proceed to Lhasa to discuss commercial questions, if necessary.

Home Government intervenes.

For reasons which were not apparent at the time, but which have since been made clearer, the Home Government were unable to accept the full terms of this agreement. The indemnity was reduced from seventy-five lakhs of rupees to twenty-five lakhs, to be paid off in three years, and the occupation of the Chumbi Valley was reduced to that period. The right to despatch the British Trade Agent to Lhasa was withdrawn. Two years later (June 1906) a Convention was concluded between Great Britain and China regulating the position in Tibet. Under this Convention Great Britain agreed neither to annex Tibetan territory, nor to interfere in the internal administration of Tibet. China undertook not to permit any other foreign State to interfere with the territory or internal administration of Tibet. Great Britain was empowered to lay down telegraph lines to connect the trade stations with India, and it was provided that the provisions of the Convention of 1890, and the Trade Regulations of 1893, remained in force. The Chinese Government paid the indemnity in three years and the Chumbi Valley was evacuated. The

only direct result of the Mission was the opening of the three trade marts and the establishment of a British Trade Agent at Gyantse.

The reason underlying the action of the British Government in modifying, in such material particulars, the Convention of Lhasa was apparent later. The Anglo-Russian Agreement was in process of negotiation, and under that Agreement Great Britain was pledging herself not to annex any portion of Tibetan territory, nor to send representative to Lhasa. A seventy-five year occupation of the Chumbi Valley would have been indistinguishable from annexation.

Chinese Action.

The sequel to the Anglo-Russian Agreement was dramatic, although it ought not to have been unexpected. On the approach of the Younghusband Mission the Dalai Lama fled to Urga, the sacred city of the Buddhists in Mongolia. He left the internal government of Tibet in confusion, and one of Sir Francis Younghusband's great difficulties was to find Tibetan officials who would undertake the responsibility of signing the Treaty. Now the suzerainty of China over Tibet had been explicitly reaffirmed. It was asserted that she would be held responsible for the foreign relations of Tibet. In the past this suzerainty, having been a "constitutional fiction," it was inevitable that China should take steps to see that she had the power to make her will respected at Lhasa. To this end she proceeded to convert Tibet from a vassal state into a province of China. In 1908 Chao Erh-feng, acting Viceroy in the neighbouring province of Szechuen, was appointed Resident in Tibet He proceeded gradually to establish his authority, marching through eastern Tibet and treating the people with great severity. Meantime the Dalai Lama, finding his presence at Urga, the seat of another Buddhist Pontiff, irksome, had taken refuge in Si-ning. Thence he proceeded to Peking, where he arrived in 1908 was received by the Court, and despatched, to resume his duties at Lhasa. Moving by leisured stages, he arrived there at Christmas 1909. But it was soon apparent that the ideas of the Dalai Lama and of the Chinese Government had little in common. The Dalai Lama expected to resume the temporal and spiritual despotism which he had exercised prior to 1904. The Chinese intended to deprive him of all temporal power and preserve him as a spiritual pope. The Tibetans had already been exasperated by the pressure of the Chinese soldiery. The report that a strong Chinese force was moving on Lhasa so alarmed the Dalai Lama that he fled from Lhasa, and by the irony of fate sought a refuge in India. He was chased to the frontier by Chinese troops, and took up his abode in Darjeeling, whilst Chinese troops overran Tibet.

Later Stages.

The British Government, acting on the representations of the Government of India: made strong protests to China against this action. They pointed out that Great Britain, while disclaiming any desire to interfere with the internal administration of Tibet, could not be indifferent to disturbances in the peace of a country which was a neighbour, on intimate terms with other neighbouring States on our frontier, especially with Nepal, and pressed that an effective Tibetan Government be maintained. The attitude of the Chinese Government was that no more troops had been sent to Tibet than were necessary for the preservation of order, that China had no intention of converting Tibet into a province, but that being responsible for the good conduct of Tibet, she must be in a position to see that her wishes were respected by the Tibetans. Finally, the Chinese remarked that the Dalai Lama was such an impossible person that they had been compelled again to depose him. Here the matter might have rested, but for the revolution in China. That revolution broke out in Szechuen, and one of the first victims was Chao Erh-feng. Cut off from all support from China, surrounded by a hostile and infuriated populace, the Chinese troops in Tibet were in a hopeless case; they surrendered, and sought escape not through China, but through India, by way of Darjeeling and Calcutta. The Dalai Lama returned to Lhasa, and in 1913, in the House of Lords on July 28, Lord Morley stated the policy of the British Government in relation to these changes. He said the declaration of the President of the Chinese Republic saying that Tibet came within the sphere of Chinese internal administration; and that Tibet was to be regarded as on an equal footing with other provinces of China, was met by a very vigorous protest from the British Government. The Chinese Government subsequently accepted the principle that China is to have no right of active intervention in the internal administration of Tibet, and agreed to the constitution of a conference to discuss the relation of the three countries. This Convention met at Simla when Sir Henry McMahon, Foreign Secretary to the Government of India; Mr. Ivan Chen, representing China; and Mr. Iong Chen Shatra, Prime Minister to the Dalai Lama, threshed out these issues. Whilst no official pronouncement has been made on the subject, it is understood that a Convention was initialled in June which recognised the complete autonomy of Tibet proper, with the right of China to maintain a Resident at Lhasa with a suitable guard. A semi-autonomous zone was to be constituted in Eastern Tibet, in which the Chinese position was to be relatively much stronger. But this Convention, it is understood, has not been ratified by the Chinese Government, owing to the difficulty of defining Outer and Inner Tibet, and in 1918 Tibet took the offensive and threw off the last vestiges of Chinese suzerainty. When the Chinese province of Szechuan went over to the South, the Central Government at Pekin was unable to finance the frontier forces or to withstand the Tibetan advance, which was directed from Lhasa and appeared to be ably managed. After the Tibetan army had occupied some towns on the confines of the Szechuan marshes, hostilities were suspended and an armistice was concluded. In the latter part of 1919, reports were circulated in China and Calcutta to the effect that this state of affairs had been interrupted by a Chinese invasion of Tibet; but the reports were contradicted by the Government of India. In response to several requests by His Holiness the Dalai Lama and his ministers that

a British Officer may be allowed to pay a friendly visit to Lhasa, the Government of India deputed for the purpose Mr. C. A. Bell, C.M.G., I.C.S., Political Officer in Sikkim, who is well known to the Dalai Lama. The party left Gyantse on the 8th November 1920.

Mr. Bell returned to India in 1921, when an official statement on the results of his work was published in the following terms. —

"The attention of the Government of India has been drawn to the renewed currency that is being given in the press to a report that Mr. Bell returned from Lhasa with the draft of a treaty with the Tibetan Government.

"The report is without any foundation and has already been contradicted. Mr Bell was sent to Lhasa at the pressing invitation of His Holiness the Dalai Lama, whose personal friendship Mr. Bell has long enjoyed, to discuss with the Tibetan Government the recent occurrences in Central Asia that had aroused their apprehensions and to advise them on their projects for the development of their country

"Mr. Bell was treated with marked cordiality, both by the Tibetan Government and the clergy and laity, during his stay in Lhasa and his mission has not only proved of assistance to the Tibetan Government, but has done much to strengthen those relations of neighbourly friendliness which it is the aim of the Government of India to maintain between India and Tibet."

Political Importance of Tibet.

The political importance of Tibet in relation to India has of necessity been changed by the Anglo-Russian Agreement. So long as that instrument is in force, it tends to decline. But no treaties are everlasting. The question has been admirably summed up by Sir Valentine Chirol ("The Middle Eastern Question"), written before the Agreement was reached. "What it would be impossible to view without some concern," he wrote, "would be the ascendance of a foreign and possibly hostile power at Lhasa, controlling the policy of a great politico-religious organisation whose influence can and does make itself appreciably felt all along the north-eastern borderland of India. Lhasa is the stronghold of Lamaistic Buddhism, a debased form of Buddhism largely overgrown with tantric philosophy—Lhasa is in fact the Rome of Central Asian Buddhism, and the many-storied Po ta-la on the hill to the west of the city is its Vatican, whence its influence radiates throughout innumerable lamaseries or Buddhist monasteries, not only into Turkestan and Mongolia and Western China, but across the Himalayas into the frontier States of our Indian Empire. Corrupt and degraded as it is, it is still unquestionably a power, and just because it is corrupt and degraded it might lend itself more readily to become for a consideration the tool of Russian ambitions.....Tibet as a Russian dependency would, at any rate, no longer be a *quantite negligeable*, and our north-eastern frontier, naturally formidable as it is, would require to be watched, just as every civilised country has to watch its frontiers, whatever they may be, where they march with a powerful neighbour, and most of all in India, where our frontier is fringed with semi-independent Native States, over which our authority is conditioned mainly on the hitherto unrivalled prestige of our Imperial power in Asia."

British Trade Agent, Yatung and Gyantse.—D. Macdonald.

THE NORTH-EASTERN FRONTIER.

The position on the northern frontier has been considered as if the British line were contiguous with that of Tibet. This is not so. The real frontier States are Kashmir, Nepal, Sikkim and Bhutan. From Chitral to Gilgit, now the northernmost posts of the Indian Government, to Assam, with the exception of the small wedge between Kashmir and Nepal, where the British district of Kumaon is thrust right up to the confines of Tibet, for a distance of nearly fifteen hundred miles there is a narrow strip of native territory between British India and the true frontier. The first of these frontier States is **Kashmir.** The characteristics of this State are considered under Native States (*q.v.*); it is almost the only important Native State in India with frontier responsibilities, and it worthily discharges them through the agency of its efficient Imperial Service troops—four regiments of infantry and two Mountain Batteries, composed mainly of the Rajput Dogras, who make excellent fighting material. One of the most important trade routes with Tibet passes through Kashmir—that through Ladak. Then we come to the long narrow strip of **Nepal.** This Gurkha State stands in special relations with the British Government. It is for all practical purposes independent, and the British resident at Khatmandu exercises no influence on the internal administration. The governing machine in Nepal is also peculiar. The Maharaj Dhiraj, who comes from the Sesodia Rajput clan, the bluest blood in India, takes no part in the administration. All power vests in the Prime Minister, who occupies a place equivalent to that of the Mayors of the Palace, or the Shoguns of Japan. The present Prime Minister, Sir Chandra Shamsher, has visited England, and has given conspicuous evidence of his attachment to the British Government. Nepal is the main Indian outpost against Tibet, or against Chinese aggression through Tibet. The friction between the Chinese and the Nepalese used to be frequent, and in the eighteenth century the Chinese marched an army to the confines of Khatmandu—one of the most remarkable military achievements in the history of Asia. Under the firm rule of the present Prime Minister Nepal has been largely free from internal disturbance, and has been raised to a strong bulwark of India. Nepal is the recruiting ground for the Gurkha Infantry, who form such a splendid part of the fighting arm of the Indian Empire. Beyond Nepal are the smaller States of **Bhutan** and **Sikkim**, whose rulers are Mongolian by extraction and Buddhists by religion. In view of Chinese aggressions in Tibet, the Government of India in 1910 strengthened their relations with Bhutan by increasing their subsidy from

fifty thousand to a lakh of rupees a year, and taking a guarantee that Bhutan would be guided by them in its foreign relations. Afterwards China had officially notified that Great Britain would protect the rights and interests of these States.

Assam and Burma.

We then come to the Assam border tribes—the Daflas, the Miris, the Abors and the Mishmis Excepting the Abors none of these tribes have recently given trouble. The murder of Mr Williamson and Dr. Gregorson by the Minyong Abors in 1911 made necessary an expedition to the Dihang valley of the Abor country on the N. E. frontier. A force of 2,500 and about 400 military police was employed from October 1911 to April 1912 in subduing the tribe. After two or three small actions the murderers were delivered up. The cost of the expedition was Rs. 21,60,000. At the same time friendly missions were sent to the Mishmi and Miri countries. Close contact with these forest-clad and leech-infested hills has not encouraged any desire to establish more intimate relations with them. The area occupied by the Nagasares runs northwards from Manipur. The Nagasares, a Tibeto-Burman people, devoted to the practice of head hunting, which is still vigorously prosecuted by the independent tribes. The Chin Hills is a tract of mountainous country to the south of Manipur. The corner of India from the Assam boundary to the northern boundary of the Shan States is for the most part included in the Myitkyina and Bhamo districts of Burma. Over the greater part of this area, a labyrinth of hills in the north, no direct administrative control is at present exercised. It is peopled by the Shans and the Kachins. Civilisation is said to be progressing and steps have been taken to prevent encroachments from the Chinese side. There is a considerable trade with China through Bhamo. On the Eastern frontier of Burma are the Shan States, with an area of fifty thousand square miles and a population of 1,300,000 These States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents. The Northern Shan Railway to Lashio, opened in 1903, was meant to be a stage in the construction of a direct railway link with China, but this idea has been put aside, for it is seen that there can never be a trade which would justify the heavy expenditure. The Southern Shan States are being developed by railway connection. The five Karenni States lie on the frontier south of the Shan States. South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. The relations between the Indian Government and the progressive kingdom of Siam are excellent.

The Frontier during the war.

Unrest, which had been brewing for some time among the Kachins, came to a head in December 1914 and January 1915, when punitive operations were undertaken. The columns originally consisted of Burma Military Police, but as the disturbance appeared more general and likely to spread, regular troops were ordered up to Myitkyina. In the Kamaing and Mogaung Jurisdictions, and the adjoining unadministered territory, six columns operated during January and February. The slight opposition encountered was in all cases successfully overcome, the rebel stockades captured, and the implicated villages destroyed.

Manipur maintained a double company of service with the Army during the war and raised a labour corps for service in France. Unfortunately some of the Kuki tribes subjects of the Manipur State, alarmed at the prospect of being sent to the scene of war and being ill-advised and misinformed as to the strength of the British forces, opposed all attempts to recruit for the labour corps and eventually broke into open rebellion. The columns of the Assam Rifles sent against them met with serious opposition, and had a considerable number of casualties, before the campaign of pacification was successful.

Railways to India.

The prospect of linking Europe and Asia by a railway running eastwards through Asia Minor has fascinated men's minds for generations. The plans suggested have, owing to the British connection with India, always lain in the direction of lines approaching India. More than 40 years ago a Select Committee of the House of Commons sat for two years to consider the question of a Euphrates Valley railway. The Shah of Persia applied to the British Foreign Office for the investment of British capital in Persian railway construction many years before the end of the nineteenth century. A proposal was put forward in 1895 for a line of 1,000 miles from Cairo and Port Said to Koweit, at the head of the Persian Gulf. While these projects were in the air, German enterprise stepped in and made a small beginning by constructing the Anatolian railway system. Its lines start from Scutari, on the southern shore of the Bosphorus, opposite Constantinople, and serve the extreme western end of Asia Minor. And upon this foundation was based the Turkish concession to Germans to build the Baghdad Railway.

Meanwhile, Russia was pushing her railways from various directions into the Central Asian territory running along the northern frontiers of Persia and Afghanistan to the borders of Chinese Turkestan. The construction of a Trans-Persian railway, connecting India, across Persia, with the Russian lines between the Black Sea and the Caspian Sea came to the forefront after the conclusion of the historic Anglo-Russian agreement regarding Persia.

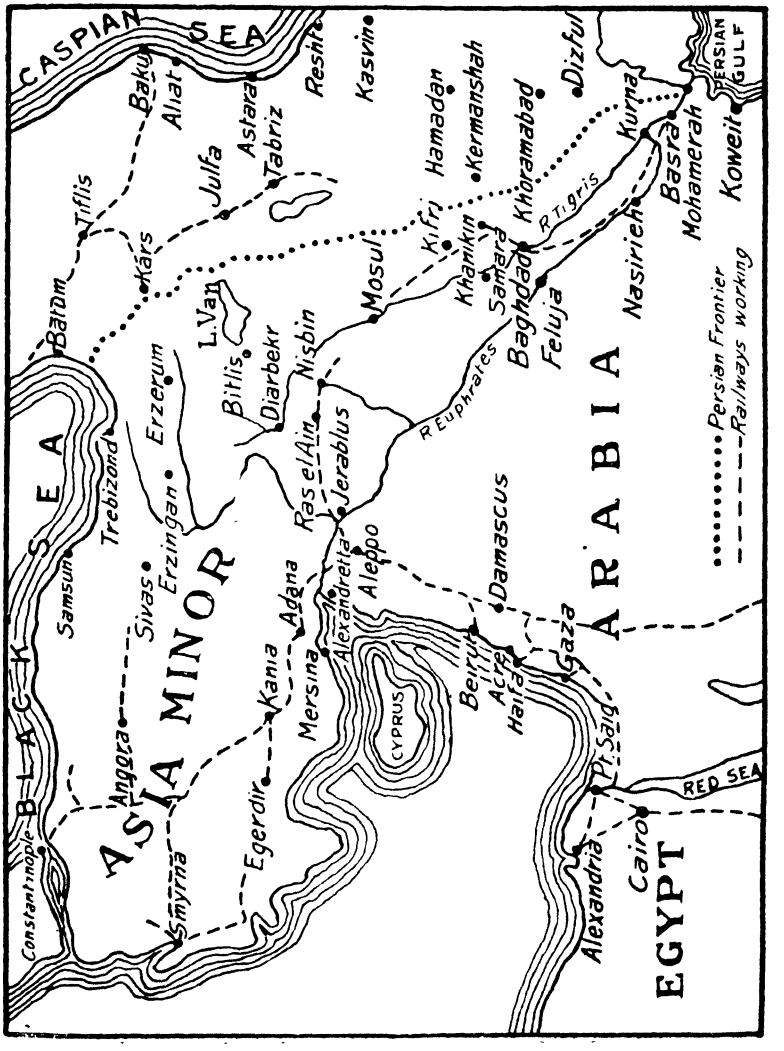
The Germans pushed forward their Baghdad railway project with a calculating shrewdness arising from their estimate of the value it would possess in their grand aim to overthrow the British Empire. The outbreak of the great war and the success of the Germans in inveigling Turkey into it saw the final stages of the construction of the railway pressed forward with passionate energy. Thus, before the overthrow of the Turks and Germans in Asia Minor and of the Germans in France the railway was completed and in use from Scutari across Anatolia, over the Taurus Mountains to Aleppo and thence eastward across the Euphrates to a point between Nisibin and Mosul. The Germans had also by that time constructed a line to Baghdad at the eastern end of the route, northwards from Baghdad to a point a considerable distance beyond Samara.

The war compelled the British to undertake considerable railway development northward from Basra, the port at the mouth of the Shat-el-Arab, the broad stream in which the Tigris and Euphrates, after their junction, flow into the head of the Persian Gulf. The system consists of a metre-gauge line from Basra *via* Nasarieh, on the Euphrates, thence northwards to Baghdad, the line passing a considerable distance westward to Kut-l-Amara, of historic fame. From Baghdad the line runs eastward approximately to the foot of the pass through which the Persian road crosses the frontier of that country. A line branches off in the neighbourhood of Kifri in the direction of Mosul. A line also runs westward from Baghdad to Feluja, on the Euphrates. With the Turkish Nationalists in control of Anatolia any question of the completion of the through Baghdad Line is indefinitely delayed.

The Trans-Persian line to join the Russian Caucasian system and the Indian railways first assumed proportions of practical importance in the winter of 1911. Both the Russian and the Indian railway systems were by then well developed up to the point likely to be the termini of a Trans-Persian line. The Russian system reached Julfa, on the Russo-Persian frontier in the Caucasus. During the war this line has been carried thence southward into the region east and south-east of Lake Urumia. The Indian railway system, on the borderland of India and Persia, was similarly much extended and improved during the war. No details have been published of proposals for the continuation of the Russo-Indian link under the restored conditions of peace. A new agreement which was negotiated between England and Persia specially provided for British assistance in the development of Persian natural resources and particularly for the extension and improvement of Persian roads suitable for motor traffic but the agreement came to naught.

There remains the possibility of linking the Russian and Indian railway system by way of Afghanistan. The suggestion has often been made in recent years that the Russian line from Merv to Herat, on the northern frontier of Afghanistan, should be linked to the Indian line which proceeds from Quetta to the Afghan border on Chaman The distance between the railway heads is about 250 miles. But there have always for strategic reasons been strong military objections to the railway across Afghanistan and after the death of the late Amir Habibullah the Afghan Government flatly opposed any suggestion for carrying the Indian or Russian railway system within their borders. What the present Afghan Government think about the matter was not shown up to the time this article was written, but the strange situation in Central Asia and beyond the Indian North-West Frontier does not suggest the early removal of the strategic difficulties.

Britain's special interests in regard to Persian communications have hitherto primarily been associated with lines running inland from the Persian Gulf, to supersede the old mule routes. Special importance has for many years been attached to schemes for a railway from Mohammerah (at the opening of the Karun Valley, where the Karun River runs into the Shat-el-Arab, just below Basra, northwards into the rich highland country of Western Persia where the valuable West Persian oil wells also lie. Britain has long established special relations with the Karun Valley and has a large trade there.


CASPIAN SEA
BLACK SEA
ASIA MINOR
ARABIA
EGYPT
Constantinople
Smyrna
Angora
Samsun
Trebizond
Sivas
Erzingan
Erzerum
Egerdir
Kania
Mersina
Adana
Alexandretta
Aleppo
CYPRUS
Jerablus
Ras el Ain
Nisbin
Diarbekr
Bitlis
L. Van
Bardm
Tiflis
Kars
Julfa
Baku
Aliat
Astara
Tabriz
Resht
Kasvin
Hamadan
Kermanshah
Kifri
Khanikin
Samara
Mosul
Baghdad
Feluja
Khoramabad
Dizful
Kurna
Basra
Mohamerah
Koweit
PERSIAN GULF
Nasiriehe
Euphrates
Tigris
Beirut
Acre
Haifa
Gaza
Damascus
Alexandria
Cairo
Pt. Saig
RED SEA
Persian Frontier
Railways working

Foreign Consular Officers in India.

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Austria-Hungary.		
The Consul-General for Netherlands, Calcutta, is in charge of Austro-Hungarian interests.		
Belgium.		
Monsieur F. Janesens	Consul-General	Calcutta.
Monsieur W. Tolkowsky	Vice-Consul and Acting Consul.	Bombay.
Mr. D. J. MacGillivray (Ag.)	Consul	Karachi.
Mr. G. K. Walker (on leave)	Do.	Madras.
Mr. A. Walker (Ag.)	Do.	Do.
Mr. P. Dormans	Do.	Rangoon.
Mr. R. A. Scott (on leave)	Do.	Akyab.
Mr. F. A. Gaudie (Ag.)	Do.	Do.
Mr. J. Lince	Vice-Consul	Calcutta.
Bolivia.		
Kumar Shyama Kumar Tagore	Consul-General	Calcutta.
Sir A. W. Binning (on leave)	Vice-Consul	Rangoon.
Mr. G. R. Neilson (Ag.)	Do.	Do.
Brazil.		
Senor M. S. de Saint Brisson Marques (on leave)	Consul	Calcutta.
Mr. J. E. de l' Estrade (in Charge)	Do.	Do.
Mr. A. R. Braga (on leave)	Do.	Bombay.
Dr. E. F. Underwood (in Charge)	Do.	Do.
Mr D. Robertson	Vice-Consul	Rangoon.
Mr. C. H. Straker	Do.	Madras.
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Senor Don P. A. Pacheco	Consul-General	Calcutta.
Vacant	Vice-Consul	Bombay.
Mr. H. Spencer	Consul	Madras.
Mr. J. G. Bendien (Ag.)	Vice-Consul	Bombay.
Mr. A. R. Leishman	Do.	Chittagong.
Mr. William Archbald (on leave)	Consul	Rangoon.
Mr. H. A. Rees (Ag.)	Do.	Do.
China.		
Mr. Chang Kuo Wai	Consul	Rangoon.
Costa Rica.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
Cuba.		
Senor W. F. Pais	Consul	Bombay.
Senor Don B. Martinez Y. Montalvan	Do.	Calcutta.
Czecho-Slovak Republic.		
Dr. Otokar Pertold	Consul	Bombay.

Name.	Appointment.	Port.
Denmark.		
Vacant	Consul-General	Calcutta.
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Mr. E. H. Danchell	Consul	Bombay.
Mr. R. T. Menzies (on leave)	Do.	Madras.
Mr. W M. Browning (Ag)	Do.	Do.
Mr. C. J. J. Britton	Do.	Rangoon.
Vacant	Vice-Consul	Karachi.
Mr. H. B. Whitby (in Charge)	Do.	Calcutta.
Mr. P. T Christensen	Do.	Moulmein.
France.		
Monsieur L. E. R. Laronce	Consul-General	Calcutta.
Monsieur J. J. Serre	Vice-Consul	Do.
Monsieur R. P. M. Vadala	Consul	Bombay.
Mr. E. L. Price	Consular Agent	Karachi
Mr. F. E. L. Worke	Do.	Madras.
Vacant	Do.	Chittago.
Monsieur J. A. Swan	Do.	Rangoonng.
Vacant	Do.	Tellichery.
Germany.		
The Swiss Consular officers are in charge of German interests.		
Greece.		
Vacant	Consul	Calcutta
Guatemala.		
Mr. H. J. Sanders (on leave)	Consul	Calcutta.
Italy.		
Cav. G. Cecchi	Consul-General	Calcutta.
Cav. Dr. G. Gorio (on leave)	Consul	Bombay.
Cav. E. Mattoli (in Charge)	Do.	Do.
Mr. J. Mickle	Do.	Rangoon.
Vacant	Vice-Consul	Calcutta.
Vacant	Consular Agent	Madras.
Vacant	Do.	Akyab.
Signor Aldo Viola (on leave)	Do	Karachi.
Mr. E. L. Rogers (in Charge)	Do.	Do.
Mr. B. Sterling Galloway	Do.	Moulmein.
Mr. A. G. Hemmons	Do.	Bassein.
Japan.		
Mr. S. Nakaya (Ag.)	Consul-General	Calcutta.
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Liberia.		
Dr. Benode Behari Banerjee	Consul	Calcutta.
Dr. E. Freeman Underwood	Do.	Bombay.
Mexico.		
Mr. R. L. B. Gall	Consul	Calcutta.

Name.	Appointment.	Port.
Netherlands.		
Mr. W. P. Montyn	Consul-General	Calcutta.
Monsieur J. G. Bendien (on leave)	Consul	Bombay.
Mr. A. van Woerkom (Ag.)	Do.	Do.
Mr. D. van Wijngaarden (on leave)	Do.	Karachi.
Mr. C. van Amerongen (in Charge)	Do.	Do.
Mr. R. A. Scott (on leave)	Do.	Akyab.
Mr. F. A. Goudia (in Charge)	Do.	Do.
Mr W. Massink (on leave)	Do.	Rangoon.
Mr. M. J. ten Houte deLange (Ag.)	Do.	Do.
Mr. W. J. U. Turnbull (on leave)	Do.	Madras.
Mr. J. B. Cunliffe, C.I.E (Ag)	Do.	Do.
Vacant	Vice-Consul	Calcutta.
Mr. J. W. Kaan (in Charge)	Do.	Do.
Norway.		
Mr. H. A. Falsen	Consul-General	Calcutta.
Mr. C. H. Hardcastle	Consul	Bombay.
Mr. H. A. Rees	Do.	Rangoon.
Mr. J. F. Simpson	Do.	Madras
Captain H. W. Fox (on leave)	Vice-Consul	Chittagong.
Mr. W. J. Webster (Ag.)	Do.	Do.
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Mr. J. B. Glass (Ag.)	Do.	Do.
Mr. D. J. Mac Gillivray (Ag.)	Do.	Karachi.
Mr. C. Hodding	Do.	Coconada.
Vacant	Do.	Tuticorin.
Mr. T. Logie (in Charge)	Do.	Do.
Persia.		
Khan Bahadur Haji Mirza Shujaet Ali Beg (Acting)	Consul-General	Calcutta.
Kumar Shyama Kumar Tagore	Vice-Consul-General	Do.
Mirza Ali Akbar Khan, B.A., Barrister-at-Law.	Consul	Bombay.
Khan Bahadur Haji Mirza Shujaut Ali Beg	Do.	Calcutta.
Vacant	Do.	Madras.
Mir Ayub Khan	Vice-Consul	Karachi.
Khan Bahadur Mirza Ali Akbar Shirazi	Do.	Rangoon.
Vacant	Do.	Moulmein.
Peru.		
Vacant	Consul	Rangoon.
Mr. J. A. Robin (temporarily in Charge)	Do.	Do.
Mr. H. C Sturges	Do.	Calcutta.
Portugal.		
Senhor C. J. dos Santos (on leave)	Consul-General	Bombay.
Mr. A. P. J. Fernandes (in Charge)	Do.	Do.
Dr. E. M. D'Souza	Consul	Rangoon.
Senhor A. A. Teixeira	Do.	Calcutta.
Vacant	Vice-Consul	Bombay.
Dr. A. B. da Fonseca	Do.	Karachi.
Senhor A. M. DeSouza	Do.	Rangoon
Senhor A. M. Teixeira	Do.	Madras.

Name.	Appointment	Port.
Siam.		
Luang Mitrakerm Raksha	Consul-General	Calcutta.
Mr. H. P. W. Macnaghten	Consul	Bombay.
Mr. E. J. Holberton (on leave)	Do.	Rngoon.
Mr. E. G. Johnston (Ag.)	Do.	Do.
Mr. C Van-der-Gucht	Do.	Moulmein.
Spain.		
Senhor Don M. Maluquery Salvador	Consul	Bombay.
Don D. C. Marco	Do.	Calcutta.
Mons. L. Grezoux	Vice-Consul	Do.
Mr. William Archbald (on leave)	Do.	Rangoon.
Mr. H. W. Child (Ag.)	Do.	Do.
Sweden.		
Mons. M. Clarholm (on leave)	Consul-General	Calcutta
Mons. H. Falsen (Ag.)	Do.	Do.
Mr. R. S. F. Simson	Consul	Madras.
Mr. J. Muller (on leave)	Do.	Bombay
Mr. K. Ringger (Ag.)	Do.	Do.
Mr. W. A. Scholes (on leave)	Do.	Rangoon.
Mr. H. A. Rees (Ag.)	Do.	Do.
Mr. T. H. Wheeler (on leave)	Vice-Consul	Calcutta.
Vacant	Do.	Moulmein.
Switzerland.		
Mons C. Ringger	Consul	Bombay.
Turkey.		
The Consular officers for Sweden are in charge of Turkish.		
United States of America.		
Mr. A. W. Weddell	Consul-General	Calcutta.
Mr. P. H. Mosely	Vice-Consul	Do.
Mr. H. A. Doolittle	Do.	Madras.
Mr. C. Thorling (in Charge)	Consul	Rangoon.
Mr. H. B. Osborn	Vice-Consul	Do.
Mr. L. G. Dawson	Consul	Madras.
Mr. Walter A. Leonard	Do.	Colombo.
Mr. John A Nye	Vice-Consul	Do.
Mr. C. M. Hathaway	Consul	Bombay.
Mr. J. C. Moomaw	Vice-Consul	Do.
Mr. R. L. Rogers	Do.	Karachi
Vacant	Consular Agent	Bassein.
Vacant	Do.	Moulmein.
Vacant	Do.	Akyab.
Venezuela.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.

The Home Government.

The Home Government of India represented for sixty years the gradual evolution of the governing board of the old East India Company. The affairs of the company were originally managed by the Court of Directors and the General Court of Proprietors. In 1784 Parliament established a Board of Control, with full power and authority to control and direct all operations and concerns relating to the civil and military government, and revenues of India. By degrees the number of the Board was reduced and its powers were exercised by the President, the lineal precursor of the Secretary of State for India. With modifications this system lasted until 1858, when the Mutiny, followed by the assumption of the Government of India by the Crown, demanded a complete change. Under the Act of 1858 (merged in the consolidating measures passed in 1915) the Secretary of State is the constitutional adviser of the Crown on all matters relating to India. He inherited generally all the powers and duties which were formerly vested either in the Board of Control, or in the Company, the Directors and the Secret Committee in respect of the Government and revenues of India.

The Secretary of State.

Until the Reform Act of 1919 came into force the Secretary of State had the unqualified power of giving orders to every officer in India, including the Governor-General, and to superintend, direct and control all acts, operations and concerns relating to the Government or revenues of India. In the relations of the Secretary of State with the Governor-General in Council no express statutory change was made, but Parliament ordained through the Joint Select Committee that in practice the conventions governing these relations should be modified; only in exceptional circumstances should he be called upon to intervene in matters of purely Indian interest where the Government and the Legislature of India are in agreement. On questions of fiscal policy, for example, in such circumstances his intervention when it does take place, is to be limited to safeguarding the international obligations of the Empire or any fiscal arrangements within the Empire to which the British Cabinet is a party. The relations of the Secretary of State and of the Government of India with provincial Governments are to be regulated by similar principles, so far as the reserved subjects for which Ministers are responsible are concerned.

Of the wide powers and duties still vested in the Secretary of State, many rest on his personal responsibility; others can be performed only in consultation with his Council, and for some of these the concurrence of a majority of the members of his Council voting at a meeting is required. The Act of 1919 greatly modified the rigidity of the law maintained for sixty years as to the relations of the Secretary of State with his Council, and he has fuller power than in the past to prescribe the manner, in which business is to be transacted. Though in practice the Council meets weekly (save in vacation periods) this has ceased to be a statutory requirement, the law now providing that there shall be a meeting at least once in every month.

The India Council.

The number of members of the Council was reduced by the Act to not less than eight and not more than 12, the Secretary of State being free to appoint within those limits. The period of office was reduced from 7 to 5 years, though the Secretary of State may, for special reasons of public advantage to be communicated to Parliament, re-appoint a member for another five years. Half the Council must be persons who have served or resided in India for at least ten years, and who have not left India more than five years before their appointment. The Act restored the old salary of £1,200, with an additional subsistence allowance of £600 for any member who was at the time of appointment domiciled in India. Lord Morley opened the door of the Council to Indians, and since 1917 the number of India members has been three.

Associated with the Secretary of State and the India Council is a Secretariat known as the India Office, housed at Whitehall. Appointments to the establishment are made by the Secretary of State in Council, and are subject to the ordinary Home Civil Service rules in relation to "junior situations."

In the past the whole cost of the India Office has been borne by the revenues of India, except that the Home Government made certain grants and remissions in lieu of a direct contribution amounting to £50,000 a year. The total net cost including pensions has been about £ 250,000 per annum. Last year, in conformity with the spirit of the new Act, an arrangement was made whereby the salary of the Secretary of State is placed on the Home estimates and the cost of the controlling and political functions exercised in Whitehall is also met from British revenues, while agency functions alone are chargeable to Indian revenues.

The High Commissionership.

The financial readjustment has been accompanied by a highly important administrative change provided for by the Act, in the creation of a High Commissioner for India in the United Kingdom with necessary establishments. With effect from October 1st, 1920, Sir William Meyer became the first High Commissioner, and took over control of the large Stores Department of the India Office, the accounts section connected therewith, and the Indian Students Branch, together with the supervision of the work of the Indian Trade Commissioner in the City. The further development of the functions and powers of the High Commissioner in discharging the agency work hitherto carried on by the India Office, and his gradual approximation to the position of a High Commissioner to the self-governing dominions will depend upon ensuing changes in the relations of the Government of India to the Secretary of State for India and Parliament. The clerical staff of the Stores Department at the India Office is being transferred to the Stores Depot off the

Thames in Belvedere Road, Lambeth. The High Commissioner and the rest of the staff transferred, have separate office accommodation at 42 Grosvenor Gardens, S.W. 1.

Another highly important change, which was to be effected at the beginning of the 1921 session, was the setting up by Parliament of a Joint Standing Committee on Indian affairs to consist of nine members of each House It is not proposed that any member of the Government should serve on the Committee. The purpose is to keep Parliament in closer touch with Indian affairs than has recently been possible, and to refer to the Committee draft rules and also Parliamentary Bills after they have received a second reading.

Secretary of State.

The Right Hon. Edwin S. Montagu, M.P.

Under-Secretaries of State.

Sir William Duke, G.C.I.E., K.C.S.I.

The Earl of Lytton.

Deputy Under-Secretary of State.

Sir Arthur Hirtzel, K.C.B.

Assistant Under-Secretary of State.

Sir Malcolm Seton, K.C.B.

Council.

Sir Charles Arnold White.

Sir Murray Hammick, K.C.S.I., C.I.E.

Sir Charles S. Bayley, G.C.I.E., K.C.S.I., I.S.O.

Sir William Didsbury Sheppard, K.C.I.E.

General Sir E. G. Barrow, G.C.B., G.C.S.I.

Sir James Bennett Brunyate, K.C.S.I., C.I.E.

Sahibzada Aftab Ahmed Khan.

Bhupendranath Basu.

Frederick Craufurd Goodenough.

Sir George O. Roos-Keppel, G.C.I.E., K.C.S.I.

Sir Malcolm Hogg.

Dadiba Merwanji Dalal.

Clerk of the Council, Sir Malcolm Seton.

Deputy Clerk of the Council, T. H. Dumbell.

Private Secretary to the Secretary of State, S. K. Brown.

Assistant Private Secretary, A. L. R. Parsons,

Political A.-D.-C. to the Secretary of State, Lieut.-Col. A. D'Arcy. G. Bannerman, C.I.E., C.V.O.

Private Secretary to Sir W. Duke, A. Dibdin.

Private Secretary to Lord Lytton, W. H. Turner.

Correspondence Departments.

SECRETARIES.

Controller of Finance, H. F. Howard, C.S.I., C.I.E.

Financial, W. Robinson, C.B.E.; C.H. Kisch, C.B.

Judicial and Public, J. E. Ferard, C.B.E.

Military, Lieut.-General Sir A. S. Cobb, V.C., K.C.B., K.C.S.I., D.S.O.

Ditto (Joint), S. F. Stewart, C.I.E.

Political and Secret, L. D. Wakely (*acting*),

Public Works, W. Stantiall.

Industries and Overseas, Sir L. J. Kershaw K.C.I.E., C.S.I.

Commercial and Revenue, E. J. Turner, C.B.E.

Director-in-Chief of the Indo-European Telegraph, Public Works Department, R. C. Barker, C.I.E.

ACCOUNTANT-GENERAL'S DEPARTMENT:—

Accountant-General, Sidney Turner, F.I.A., *also Director of Funds and Official Agent to Administrators-General in India*.

REGISTRY AND RECORD DEPARTMENT.—*Registrar and Superintendent of Records*, W. Foster, C.I.E.

Miscellaneous Appointments.

Auditor, H. A. Cooper.

Government Director of Railway Companies, G. Deuchars.

Librarian, Fredk. W. Thomas, M.A., P.H.D.

President of Medical Board for the Examination of Officers of the Indian Services and Adviser to the Secretary of State on Medical matters, Surg.-Gen. Sir R. H. Charles, G.C.V.O., M.D., I.M.S. (retd.), F.R.C.S.I.; *Members of the Medical Board*, Lt.-Col. C.T. Hudson, C.M.G., I.M.S., (retd.), and Lt.-Col. C. H. L. Meyer, I.M.S. (retd).

Legal Adviser and Solicitor to Secretary of State, Sir Edward Chamier.

Inspector of Military Equipment and Clothing, Major-Gen. Sir John Steevens, K.C.B., K.C.M.G.

Surveyor and Clerk of the Works, T. H. Winny, A.R.I.B.A.

Ordnance Consulting Officer, Col. J. H. Lawrence Archer, C.I.E.

Consulting Engineers, Messrs. Rendel, Palmer and Tritton.

Stockbroker, Horace Hubert Scott.

High Commissioner's Departments.

The High Commissioner, Sir William S. Meyer, G.C.I.E., K.C.S.I.

Secretary, J. W. Bhore, I.C.S., C.B.E.

Chief Accountancy Officer, G. H. Stoker, O.B.E.

Personal Assistant, W. G. Crockett, C.B.E.

Joint Secretaries for Indian Students, N. C. Sen, O.B.E., and T. Quayle, D. Litt (Lond).

Stores Department Depot at Belvedere Road, Lambeth, S. E. 1.

Director-General, T. Ryan, C.I.E.

Deputy Director, R. R. Howlett.

Superintendent of Depot, Lt.-Col. S. S. W. Paddon, C.I.E.

Indian Trade Commissioner, (Winchester House, Old Broadstreet, E. C. 2) D. T. Chadwick, C.I.E., I.C.S.

Secretaries of State for India.

	Assumed charge.
Lord Stanley, P.C. (*a*)	1858
Sir Charles Wood, Bart. (*b*)	1859
Earl de Grey and Ripon, P.C. (*c*) ..	1866
Viscount Cranborne (*d*)	1866
Sir Stafford Northcote, Bart. (*e*)	1867
The Duke of Argyll, K.T., P.C.	1868
The Marquis of Salisbury, P.C. (2nd time)	1874
Gathorne Hardy, P.C., created Viscount Cranbrook, 14 May, 1878 (*f*)	1878
The Marquis of Hartington, P.C. (*g*) ..	1880
The Earl of Kimberly, P.C.	1882
Lord Randolph Churchill, P.C.	1885
The Earl of Kimberley, K.G., P.C. (2nd time)	1886
Sir Richard Assheton Cross, G.C.B., P.C., created Viscount Cross, 19 Aug., 1886	1886
The Earl of Kimberley, K.G., P.C. (3rd time)	1892
H. H. Fowler (*h*)	1894
Lord George F. Hamilton, P.C	1895
St. John Brodrick (*i*)	1903
John Morley, O.M. (*j*)	1905
The Earl of Crewe, K.G.	1910
Viscount Morley of Blackburn, O.M. ..	1911
The Earl of Crewe, K.G. (*k*)	1911
Austen Chamberlain, M.P.	1915
E. S. Montagu, M.P.	1917

(*a*) Afterwards (by succession) Earl of Derby.

(*b*) ,, (by creation) Viscount Halifax.

(*c*) ,, (by creation) Marquess of Ripon.

(*d*) ,, (by succession) Marquess of Salisbury.

(*e*) ,, (by creation) Earl of Iddesleigh.

(*f*) ,, (by creation) Earl Cranbrook

(*g*) ,, (by succession) Duke of Devonshire.

(*h*) ,, (by creation) Viscount Wolverhampton, G.C.S.I.

(*i*) ,, (by succession) Viscount Midleton.

(*j*) ,, (by creation) Viscount Morley of Blackburn, O.M.

(*k*) ,, (by creation) Marquess of Crewe, K.G.

The Army.

The great sepoy army of India originated in the small establishments of guards, known as peons, enrolled for the protection of the factories of the East India Company; but sepoys were first enlisted and disciplined by the French, who appeared in India in 1665. Before this detachments of soldiers were sent from England to Bombay, and as early as 1665 the first fortified position was occupied by the East India Company at Armagon, near Masulipatam. Madras was acquired in 1610, but in 1654 the garrison of Fort St. George consisted of only ten men. In 1661 Bombay was occupied by 400 soldiers, and in 1668 the number was only 285 of whom 93 were English and the rest French, Portuguese, and natives.

After the declaration of war with France in 1744 the forces were considerably increased, but this did not prevent the French capturing Madras in 1746. Following the French example, the English raised considerable sepoy forces and largely increased the military establishments. In 1748 Major Stringer Lawrence landed at Fort St. David to command the forces of the Company. The English foothold in India was then precarious and the French under Dupleix were contemplating fresh attacks. It became necessary for the English Company to form a larger military establishment. The new commandant at once set about the organisation and discipline of his small force, and the garrison was given a company formation. This was the beginning of the regular Indian Army of which Lawrence subsequently became Commander-in-Chief. In Madras the European companies were developed into the Madras Fusiliers; similar companies in Bengal and Bombay became the 1st Bengal and 1st Bombay Fusiliers. The native infantry were similarly organised by Lawrence and Clive. By degrees Royal Regiments were sent to India, the first being the 39th Foot, which arrived in 1754.

Struggle with the French.—From this time for a century or more the army in India was engaged in constant war. After a prolonged war with the French, whom Dupleix had by 1750 raised to the position of the leading power in India, the efforts of Stringer Lawrence, Clive, and Eyre Coote completed the downfall of their rivals, and the power of England was established by the battle of Plassey in Bengal, and at Wandewash in Southern India, where the French were finally defeated in 1761. A number of independent States, owning nominal allegiance to the Emperor at Delhi, had risen on the decline of the Mughal Empire, some ruled by Mahratta Princes and others by Musalman adventurers such as Hyder Ali of Mysore. A prolonged struggle ensued with the latter and his son and successor Tipu Sultan, which ended only with the defeat and death of Tipu and the capture of Seringapatam in 1799.

Reorganisation of 1796.—In 1796 the native armies, which had been organised on the Presidency system, were reorganised. The European troops were 13,000 strong and the natives numbered some 67,000, the infantry being generally formed into regiments of two battalions each. In Bengal regiments were formed by linking existing battalions of ten companies each with large establishments of English officers. The Madras and Bombay armies were at the same time reorganised on similar lines, and cavalry and artillery companies were raised.

In 1798 the Marquis Wellesley arrived as Governor-General firmly imbued with the necessity of destroying the last vestiges of French influence. In pursuance of this policy he reduced Mysore, where Tipu was intriguing with the French, and then turned his attention to the Mahratta States, in which Sindhia had established power over the Mughal Emperor at Delhi by means of a large regular army officered by Europeans under the French adventurer Perron. In campaigns against Sindhia in Hindustan by a British Army under General Lake, and in the Deccan against that prince and the Raja of Berar by an army under General Wellesley, afterwards Duke of Wellington, the power of these Chiefs was broken in the battles of Laswari and Assaye. French influence was finally destroyed, and the Mughal Emperor was released from the domination of the Mahrattas. Subsequently Holkar also was reduced, and British power established on a firm footing.

Mutiny at Vellore.—The Indian Army had been from time to time subject to incidents of mutiny which were the precursors of the great cataclysm of 1857. The most serious of these outbreaks occurred at the fort of Vellore in 1806 when the native troops suddenly broke out and killed the majority of the European officers and soldiers quartered in the fort, while the striped flag of the Sultan of Mysore, whose sons were confined there, was raised upon the ramparts. The mutiny was suppressed by Colonel Gillespie, who galloped over from Arcot at the head of the 19th Light Dragoons, blew in the gate of the fort, and destroyed the mutineers. This retribution put a stop to any further outbreaks in the army.

Overseas expeditions.—Several important overseas expeditions were undertaken in the early part of the nineteenth century. Bourbon was taken from the French; Ceylon and the Spice Islands were wrested from the Dutch, and Java was conquered in 1811 by a force largely composed of Bengal troops which had volunteered for this service.

In 1814 the Nepal War took place in which the brave Gillespie, who had distinguished himself in Java, was killed when leading the assault on the fort of Kalunga. The Gurkhas were overcome in this war after offering a stout resistance.

In 1817 hostilities again broke out with the Mahrattas, who rose against the British during the progress of operations against the Pindaris. Practically the whole army took the field and all India was turned into a vast camp. The Mahratta Chiefs of Poona, Nagpur, and Indore rose in succession, and were beaten respectively at Kirki, Sitabaldi, and Mehidpur. This was the last war in Southern India. The tide of

war rolled to the north never to return. In the Punjab, to which our frontier now extended, our army came into touch with the great military community of the Sikhs.

In 1824 the armies were reorganised, the double-battalion regiments being separated, and the battalions numbered according to the dates they were raised. The Bengal Army was organised in three brigades of horse artillery, five battalions of foot artillery, two regiments of European and 68 of native infantry, 5 regiments of regular and 8 of irregular cavalry. The Madras and Bombay armies were constituted on similar lines, though of lesser strength.

First Afghan War and Sikh Wars—In 1839 a British Army advanced into Afghanistan and occupied Cabul. There followed the murder of the British Envoys and the disastrous retreat in which the army perished. This disaster was in some measures retrieved by subsequent operations, but it had far-reaching effects on British prestige. The people of the Punjab had witnessed these unfortunate operations, they had seen the lost legions which never returned, and although they saw also the avenging armies they no longer regarded them with their former eyes. Sikh aggression led to hostilities in 1845-46, when a large portion of the Bengal Army took the field under Sir Hugh Gough. The Sikhs were defeated after stubborn fights at Mudki and Ferozeshahr, the opening battles, but did not surrender until they had been overthrown at the battles of Aliwal and Sobraon. Two years later an outbreak at Multan caused the Second Sikh War when, after an indecisive action at Chilianwala, our brave enemies were finally overcome at Gujerat, and the Punjab was annexed. Other campaigns of this period were the conquest of Sind by Sir Charles Napier, and the Second Burmese War, the first having taken place in 1824.

The conquest of the Punjab extended our frontier to the country inhabited by those turbulent tribes which have given so much trouble during the past sixty years while they have furnished many soldiers to our army. To keep order on this border the Punjab Frontier Force was established, and was constantly engaged in small expeditions which, while they involved little bloodshed, kept the force employed and involved much arduous work.

The Indian Mutiny.—On the eve of the mutiny in 1857 there were in the Bengal Army 21,000 British and 137,000 native troops; in the Madras Army 8,000 British and 49,000 native troops; and in Bombay 9,000 British and 45,000 native troops. The proportion of native to British was therefore too large for safety The causes of the mutiny were many and various. Among these were the annexation policy of Lord Dalhousie, especially that of Oudh from which the greater part of the Bengal Army was drawn; interference with the privileges of the sepoy with respect to certain allowances; and lack of power on the part of commanding officers either to punish or reward. The final spark which fired the revolt was the introduction of a new cartridge. The muskets of those days were supplied with a cartridge in which the powder was enclosed in a paper cover, which had to be bitten off to expose the powder to ignition. In 1857 a new cartridge was introduced with paper of a glazed texture which it was currently reported was greased with the fat of swine and oxen, and therefore unclean alike for Muhammadans and Hindus. This was interpreted as an attempt to destroy the caste and the religion of the sepoys. Skilful agitators exploited this grievance, which was not without foundation, and added reports that flour was mixed with bone-dust and sugar refined with the blood of oxen.

Disaffection culminated in mutiny at Berhampur and in an outbreak at Barrackpore where sepoy Mangal Pande attacked a European officer. The next most serious manifestation was the refusal of men of the 3rd Bengal Cavalry at Meerut to take the obnoxious cartridge. These men were tried and sentenced to long terms of imprisonment, their fetters being riveted on parade on the 9th May. Next day the troops in Meerut rose, and, aided by the mob, burned the house of the Europeans and murdered many. The troops then went off to Delhi. Unfortunately there was in Meerut no senior officer capable of dealing with the situation. The European troops in the place remained inactive, and the mutineers were allowed to depart unmolested to spread the flames of rebellion.

Delhi is the historic capital of India. On its time worn walls brood the prestige of a thousand years of Empire. It contained a great magazine of ammunition. Yet Delhi was held only by a few native battalions, who joined the mutineers. The Europeans who did not succeed in escaping were massacred and the Delhi Emperor was proclaimed supreme in India. The capital constituted a nucleus to which the troops who mutinied in many places flocked to the standard of the Mughal. An army was assembled for the recovery of Delhi but the city was not captured until the middle of September . In the meantime mutiny had spread. The massacres of Cawnpore and Jhansi took place, and Lucknow was besieged until its relief on the 27th September. The rebellion spread throughout Central India and the territory that now forms the Central Provinces, which were not recovered until Sir Hugh Rose's operations in 1858 ended in the defeat of the Rani of Jhansi.

Re-organisation after the Mutiny.—After the mutiny the Government of India was assumed by Queen Victoria and the East India Company ceased to exist The Company's European regiments were transferred to the Crown. The Bengal Army had almost disappeared and while a new army was raised for that Presidency the Madras and Bombay Armies were also reorganised. The native artillery was abolished, only mountain batteries and some field batteries of the Hyderabad Contingent being maintained. A Staff Corps of officers, borne on a general list for each Presidency, was instituted. The total strength on re-organisation was 65,000 British and 140,000 Indian troops.

Minor Campaigns—During the period until 1879, when the Second Afghan War began, there were many minor campaigns including the China War of 1860, the Ambeyla Campaign, and the Abyssinian War Then followed the Afghan War in which the leading figure was

Lord Roberts. There were expeditions to Egypt and China, and Frontier Campaigns of which the most important was the Tirah Campaign of 1897. There were also the prolonged operations which led up to or ensued upon the annexation of Burma, several campaigns in Africa, and the expeditions to Lhasa. But until 1914, since the Afghan War, the army of India, except that portion of the British garrison which was sent to South Africa in 1899, had little severe fighting, although engaged in many arduous enterprises.

Reforms.—During the period under review up to 1914 many reforms took place. Races considered of inferior military value were eliminated, their places in the ranks being taken by the warlike classes of the north. In this manner the greater part of the old Madras and Bombay armies lost its identity. Class regiments and class companies were formed, and regiments were linked in threes, each group with a regimental centre. Imperial Service troops were raised by the Chiefs for the service of the paramount power. In 1891 the Staff Corps of the three Presidencies were amalgamated, and in 1893 the appointment of Commander-in-Chief in the Bombay and Madras Armies was abolished. The number of British officers serving in Indian regiments was progressively increased, until the establishment was raised to 13 or 14, after having at one period sunk as low as 8 per battalion. The administrative services were improved, the Supply and Transport and the Ordnance and Military Works Services being reorganised.

Reforms received a great impetus during the term of office as Commander-in-Chief of **Lord Kitchener**, who arrived in India at the end of 1902 There had hitherto been no General Staff in India, all Staff work being carried out under orders issued from the offices of the Adjutant General and the Quartermaster General. The administrative services were under the Military Member of Council, who was independent of the Commander-in-Chief, who had to submit through the Military Member all proposals involving financial expenditure beyond his very limited powers. Lord Kitchener wished to remove what he considered the obstruction of the Military Department of the Government of India, and bring the entire army administration under the Commander-in-Chief. The proposal to abolish the Military Department was opposed by **Lord Curzon**, the Governor-General, who eventually resigned rather than assent to measures which he considered to be not in the best interests of the State. In place of the Military Department, a Military Supply Department was instituted with reduced powers, but this soon disappeared and an Army Department under control of the Commander-in-Chief in his capacity as Member of Council was established in its place.

Lord Kitchener's chief work lay in the reorganisation of the Army which was not based on war conditions but was scattered in units from which formations were organised for service. Nine Divisions were now formed, in addition to the Burma Division. These Divisions were organised for war, and could take the field intact, leaving behind sufficient troops for internal security.

Northern Command.

General Sir W. R. Birdwood, Bart. (G.O.C.-in-C.)
Brigadier-General C. M. Wagstaff (B.G., G.S.)
Col. F. E. G. Talbot.
Bt. Lt. Col H. N. A. Hunter, D.S.O.
Bt. Lol. W. H. Hastings.
Capt. K. C. D. Dawson, M.B.E.

Western Command.

Lt.-General Sir W. P. Braithwaite (G.O.C.-in-C.)
W. S. Leslie (B.D., G.S.) Br.-General Gwyer.
Major E. B. Powell, D.S.O.
Lt. H. W. Undehill.

Eastern Command.

Lt.-General Sir H. Hudson (G.O.C.-in-C.)
Br.-General G. H. N. Jackson (B.G., G.S.)
Captain H. E. Festing, D.S.O.
Lt. Surtees, M.C.

Southern Command.

Lt.-General Sir W. R. Marshall (G.O.C.-in-C.)
Br.-General W. H. Norman (B.G., G.S.)
Major H. G. Lee-Warner, D.S.O.
Major J. N. D. Dicklander.

The fighting races.—The fighting classes that contribute to the composition of the Indian Army have hitherto been drawn mainly from the north of India, but the experiences of the great war have caused some modifications in the opinions previously held as to the relative value of these and other fighting men. The numbers of the various estates and tribes enlisted in the Army have since the war undergone fluctuations, and it is not possible at present to give exact information as to their proportions. Previous to the war the Sikhs contributed very large numbers both to the cavalry and infantry, and the contribution of the Gurkhas was also large; it is probable that these classes preserve their preponderance. The Sikhs, who inhabit the Punjab originated in a sect founded near Lahore by a peasant in the early part of the sixteenth century and in the course of a hundred years grew into a formidable militant power. Muhammadans of various races contribute a still larger proportion to both the cavalry and infntry. These are drawn both from the north and the south of India, as well as from beyond the Frontier. They are all excellent fighting men, hardy and warlike, who have furnished soldiers to all the great powers of India for many hundreds of years. As cavalry the Muhammadans are perhaps unequalled by any other race in the East, being good horsemen and expert men-at-arms.

Next in point of numbers are the Gurkhas of Nepal, who were at the outbreak of war formed in twenty complete battalions, but these have been considerably increased. As fighters in the hills they are unsurpassed even by the Pathans of the North-West Frontier, but the Garhwalis are equally good mountaineers.

The professional military caste of India from time immemorial has been the Rajput, inhabiting not only Rajputana but the United Provinces and Oudh. Of fine physique and martial bearing, these warriors of Hindustan formed the backbone of the old Bengal Army, and have sustained the English flag in every campaign in the East. Their high caste and consequent

prejudices in no respect interfere with their martial instincts and efficiency in war. They furnish many battalions. The Garhwalis are Hill Rajputs, good and gallant soldiers, who have proved themselves equal to any other troops on the field of battle and have established an imperishable record in the war both in Europe and in the East. The two battalions which were all we had in 1914 have since been added to. The Jats are a fine and warlike race of Hindus found in the Delhi and Rohtak districts and adjoining territory. It was these people who held out so bravely at Bharatpur and repelled Lord Lake's army in 1805. They have proved themselves good soldiers on the battlefields of Europe. Dogras are good and steady soldiers found in the hilly districts of the Punjab. They fought well in Flanders and in Mesopotamia.

Among those who have rendered signal and gallant service in the war are the Mahrattas of the Deccan and the Konkan, who have revived the reputation held by their race in the days of Shivaji, the founder of the Mahratta Empire. It is probable that their proved efficiency in war will lead to their recruitment in larger numbers in future.

In addition to the castes that have been mentioned, low caste men from the south and other parts of India have filled the ranks of the Pioneer regiments and Sappers and Miners, and done their duty well in every campaign in which they have been engaged.

Summary of India's Effort in the War.—In a despatch by the Commander-in-Chief published in July, 1919, the whole operations of the Indian Army during the war are reviewed. His Excellency gives in it the following figures showing the extent of India's contribution in terms of men. On the outbreak of war, the combatant strength of the Indian Army, including reservists, was 194,000 Indian ranks; enlistments during the war for all branches of the service amounted to 791,000, making a total combatant contribution of 985,000. Of this number 552,000 were sent overseas. As regards non-combatants, the pre-war strength was 45,000; an additional 427,000 were enrolled during the war and 391,000 were sent overseas. The total contribution of Indian personel has thus been 1,457,000 of whom 943,000 have served overseas. Casualties amounted to 106,594, which include 36,696 deaths from all causes. The number of animals sent overseas was 175,000.*

THE ESHER REPORT.

It was announced in July, 1919, that the Secretary of State for India, with the concurrence of the Secretary of State for War, had appointed a committee to inquire into the administration and organisation of the Army in India.

The terms of reference were :—

1. To inquire into and report, with special reference to post-bellum conditions, upon the administration and, where necessary, the organisation of the Army in India, including its relations with the War Office and the India Office, and the relations of the two offices with one another.

2. To consider the position of the Commander-in-Chief in his dual capacity as head of the Army and member of the Executive Council, and to make recommendations.

3. To consider and report upon any other matters which they may decide are relevant to the inquiry.

The Report:—The Report was submitted to the authorities in May 1920 and published some months later. Among the outstanding recommendations in the mass of detailed proposals scattered through more than 100 foolscap pages and nowhere succinctly outlined are the following :—

Diminution of the detailed control exercised by the India Office. Membership of the India Council by an officer of high military rank to be abolished. The Military Department Secretary at the India Office to be a Deputy Chief of the Imperial General Staff, the Chief, either directly or through him, being the sole responsible military adviser of the Secretary of State.

The Commander-in-Chief in India to be the sole military adviser of the Government of India, and to be the administrative as well as the executive head of the Army, the Army Department and the Headquarters Staff being consolidated under him.

The Defence Committee set up in India during the war to be continued; a Military Council to be established; and decentralization to be promoted by the formation of four commands, each under an Army commander graded as a general officer commanding-in-chief.

Liberal and sympathetic treatment of all ranks in the Army in India, and the removal of such grievances as are shown to exist.

Existing services to be reorganized, and new services to be developed and equipped.

The Report Condemned:—The publication of the report evoked a storm of criticism in India, which protested *in toto* against the main principle underlying it, namely that the Army in India was not for the defence of India, but must be considered in relation to the general defence of the Empire. So strong was this criticism that the Government appointed a representative committee of the Legislatures, who focussed their opinion in a report which embodied the following resolutions :—

This Assembly recommends to the Governor-General in Council :

(*a*) That the purpose of the Army in India must be held to be the defence of India against external aggression and the maintenance of internal peace and tranquillity. To the extent to which it is necessary for India to maintain an army for these purposes, its organisation, equipment and administration should be thoroughly up to date, and, with due regard to Indian conditions, in accordance with present-day standards of efficiency in the British army so that when the Army in India has to co-operate with the British Army on any occasion,

* For a record of the services of the Indian Army in the War, see The Indian Year Book for 1920, p. 152, *et seq.*

there may be no dissimilarities of organisation, etc., which would render such co-operation difficult. For any purpose other than those mentioned in the first sentence the obligations resting on India should be no more onerous than those resting on the Self-Governing Dominions, and should be undertaken subject to the same conditions as are applicable to those Dominions.

(*b*) To repudiate the assumption underlying the whole Report of the Esher Committee:—

(1) That the administration of the Army in India cannot be considered otherwise than as part of the total armed forces of the Empire, and

(2) That the military resources of India should be developed in a manner suited to Imperial necessities.

Overseas Service:—II. This Assembly recommends to the Governor-General in Council that the Army in India should not as a rule be employed for service outside the external frontiers of India, except for purely defensive purposes, or with the previous consent of the Governor-General in Council in very grave emergencies, provided that this resolution does not preclude the employment on garrison duties overseas of Indian troops at the expense of His Majesty's Government and with the consent of the Government of India.

Organisation:—III. This Assembly recommends to the Governor-General in Council that the absence of full responsible Government in India, the differences in conditions between India and England and the provisions of the Government of India Act do not warrant differentiation in the army administration between India and England in regard to the ultimate control of, and responsibility for, the defence of the country, and that, in view of the desirability of assimilating the system of administration in India to that in the United Kingdom, which has been arrived at after prolonged experiments, and the desirability of emphasizing the principle of the ultimate supremacy of the civil power, it is essential that the Commander-in-Chief should, without prejudice to his official precedence, cease to be a member of the Governor-General's Executive Council, and that the Portfolio of Defence, including Supply, should be entrusted to a civilian member of the Executive Council, assisted by an Army Council including the Commander-in-Chief and other high military experts and a certain number of civilians, more or less on the model of the Army Council in England.

Supply:—IV. This Assembly recommends to the Governor-General in Council that if the Portfolio of Defence including Supply is not entrusted to a civilian member of the Executive Council as recommended above, the proposal of the majority of the Esher Committee for the creation of a separate department for Production and Provision under a member of the Executive Council be not accepted, and that the proposal of the minority, namely that the responsibility should be entrusted to a Surveyor-General of Supply who should be a civil member of the Commander-in-Chief's Military Council, be accepted. This would seem to have the merit of being more logical and economical and would have the further advantage of avoiding the addition of a civil member to the Executive Council in connection with military administration.

Senior Appointments:—V. This Assembly recommends to the Governor-General in Council that:

(*a*) The Commander-in-Chief and the Chief of the General Staff in India should be appointed by the Cabinet on the nomination of the Secretary of State for India in consultation with the Government of India and the Secretary of State for War.

(*b*) In the case of Army Commanders who are officers of the Indian Army the appointment should be by the Secretary of State for India on the nomination of the Government of India.

(*c*) Appointments to the offices mentioned against Serial Nos. 5, 6, 7, 8, 10, 12 (Report Schedule annexed to Section VI) should be made in the manner proposed for Army Commanders.

(*d*) The appointment of Secretary to the Military Department, India Office, should be made by the Secretary of State on the recommendation of the Government of India and after advice obtained from the Chief of the Imperial General Staff. He should *ex officio* have the status of a Deputy Chief of the Imperial General Staff and should have the right of attending the meetings of the Army Council when questions affecting India are discussed. He should not be under the orders of the Chief of the Imperial General Staff.

C. I. G. S.:—VI. This Assembly recommends to the Governor-General in Council that the Commander-in-Chief's right of correspondence with the Chief of the Imperial General Staff should be subject to the restriction that it does not commit the Government of India to any pecuniary responsibility or any line of military policy which has not already been the subject of decision by them; copies of all such correspondence at both ends being immediately furnished to the Government of India and the Secretary of State for India.

Indian Officers:—VII. This Assembly recommends to the Governor-General in Council:—

(*a*) That the King Emperor's Indian subjects should be freely admitted to all Arms of His Majesty's Military, Naval and Air forces in India and the ancillary services and the auxiliary forces, that every encouragement should be given to Indians including the educated middle classes, subject to the prescribed standards of fitness, to enter the commissioned rank of the Army, and that in nominating candidates for the entrance examination, unofficial Indians should be associated with the nominating authority.

(*b*) That not less than 25 per cent. of the King's Commissions granted every year should be given to His Majesty's Indian subjects to start with.

Indian Military College:—VIII. This Assembly recommends to the Governor-General in Council.—

(*a*) That adequate facilities should be provided in India for the preliminary training of Indians to fit them to enter the Royal Military College, Sandhurst.

(*b*) That the desirability of establising in India a Military College, such as Sandhurst, should be kept in view.

Pay:—IX. This Assembly recommends to the Governor-General in Council that, in the interest of economy and in view of the likelihood of the growth of the Indian element in the commissioned ranks, it is essential that before vested interests arise, the pay of all commissioned ranks in all branches of the Army should be fixed on an Indian basis with an overseas allowance in the case of British Officers and with a similar allowance for Indian officers holding the King's Commission, when serving overseas.

Territorial Army—X. This Assembly recommends to the Governor-General in Council that in view of the need for the preparation of India to undertake the burden of self-defence and in the interests of economy, it is essential that a serious effort should be made —

(*a*) To organise and encourage the formation of an adequate Territorial Force on attractive conditions.

(*b*) To introduce in the Indian Army a system of short colour service followed by a few years in the reserve.

(*c*) To carry out a gradual and prudent reduction of the ratio of the British to the Indian troops.

XI This Assembly recommends to the Governor-General in Council that officers in the Indian Territorial Force should have the rank of 2nd-Lieutenant, Lieutenant or higher rank, as the case may be, and that no distinction should be made between the Indian Territorial Force and the Indian Auxiliary Force in respect of the authority which signs the Commissions, and that officers in these two Forces should take rank *inter se* according to dates of appointment

Exchange of Officers:—XII. This Assembly recommends to the Governor-General in Council that no proposals for interchange of officers, between the British and Indian services should be carried out unless the following conditions are satisfied:

(*a*) That the cost to Indian revenue should not be thereby appreciably increased.

(*b*) That such proposals should not be allowed to interfere with a steady expansion in the proportion of King's Commissions thrown open to Indians in the Indian Army.

(*c*) That the interchange of British officers should, in no way, affect the control of the Government of India over the entire Army in India.

Economy:—XIII. This Assembly recommends to the Governor-General in Council that, having regard to the creation of two additional commands in India the Government of India do consider the expediency of reducing the size of the administrative staff at Army Head quarters.

XIV. This Assembly recommends to the Governor-General in Council that, as soon as the external and internal conditions of India permit, the Governor-General in Council should, with the concurrence of the Secretary of State, appoint a Committee adequately representative of non-official Indian opinion for the purpose of examining and reporting upon:

(*a*) The best method of giving effect to the natural rights and aspirations of the people of India to take an honourable part in the defence of their country and prepare the country for the attainment of full responsible government which has been declared to be the goal of British policy.

(*b*) The financial capacity of India to bear the burden of military expenditure;

(*c*) Her claim to equality of status and treatment with the Self-Government Dominions, and

(*d*) The methods of recruitment to the commissioned ranks of the Indian Army,

XV. This Assembly recommends to the Governor-General in Council that Anglo-Indians should be included in the terms "Indian subjects" or "Indians" wherever such terms occur in the above resolution.

Assembly's Decisions:—These resolutions were subject to full debate in the Imperial Legislative Assembly in the course of which Resolution No 3 proposing the creation of a Portfolio of Defence was negatived.

Resolution 4 was carried with the following amendment that the words from "if the portfolio" down to "recommended above" be omitted.

On Resolution No 7 an important amendment was carried by a bare majority and was accepted as a substantive proposition in the following form.—

This Assembly recommends to the Governor-General in Council that (*a*) That the King Emperor's Indian subjects should be freely admitted to all arms of His Majesty's Military, Naval and Air forces in India and the Ancillary services and the Auxiliary forces, that every encouragement should be given to Indians including the educated middle classes subject to the prescribed standards of fitness, to enter the commissioned ranks of the Army and that in nominating candidates for the entrance examinations, unofficial Indians should be associated with the nominating authority and in granting King's Commissions, after giving full regard to the claims to promotion of officers of the Indian Army who already hold the commission of His Excellency the Viceroy, the rest of the commissions granted should be given to cadets trained at Sandhurst. The general rule in selecting candidates for this training should be that the large majority of the selections should be from the communities which furnish recruits and as far as possible in proportionto the numbers in which they furnish such recruits."

Resolution 8 was carried with the following amendment:

"That for clause (*b*) the following clause be substituted:

"(*b*) That as soon as funds be available, steps should be taken to establish in India a Military College, such as Sandhurst, and the desirability of establishing in India training and educational institutions for other branches of the Army should be steadily kept in view."

Reserves.

The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904 when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month and also to form an Indian cavalry reserve by extending the system to Silladar cavalry regiments. Reservists obtain a pension after 25 years' total service.

Reserve of Officers.—For some years there has been entertained what was called. The Indian Army Reserve of Officers—a small body of trained officers who would be available to replace the casualties amongst the British officers serving with the Indian troops in time of war. This branch of the service was however grievously neglected; the conditions of service were unattractive, the prospects of promotion were practically nil; and the military authorities preferred to rely on the expedient of multiplying the number of British officers serving with Indian troops in order to meet casualties, rather than to train up an effective reserve This policy tested by the war was found wanting The casualties amongst the British officers with the Indian regiments were very large indeed; these regiments lost their initiative when deprived of the officers on whom they had been taught to rely, and it was impossible to make the great gaps good from the ordinary officer class, because of their lack of knowledge of the Indian languages and Indian conditions An appeal for recruits for the Indian Army Reserve of Officers met with a very ready response. The first enrolments reached the substantial figure of fourteen hundred, a very large proportion of whom were drawn from the Volunteer Officers, or from the ranks of special corps like the Light Horse, who are ordinarily recruited from the officer class. The officers selected were put through a rapid course with British and Indian regiments; made to pass a language test, and when efficient were sent to serve with the Indian regiments at the front. They have done excellent service and have suffered many casualties; indeed, without this reinforcement of officers specially acquainted with Indian conditions, the efficiency of the Indian Regiments could not have been maintained. The numbers were raised to over 4,000.

Indian State Troops.

The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British Officers, though available for Imperial service when placed at the disposal of the British Government by their Rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West Frontier and also in China and Somaliland. At the beginning of the decade (1901-02 to 1911-12) twenty-three States between them supplied a total of over 16,000 men. Some additional offers of contingents have since been accepted, and the total strength is approximately 22,271, towards which twenty-nine States contributed. The total included some 10,000 infantry, and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad and Alwar contribute over 1,000 each. On the outbreak of the war practically the whole body of Imperial Service Troops was immediately placed at the unfettered service of the King-Emperor. Many of these offers were gratefully accepted and large bodies of Imperial Service Troops proceeded to one or other of the theatres of the war. These Troops were re-named The Indian State Troops in December 1921.

The Imperial Cadet Corps.

The Imperial Cadet Corps was founded in 1901, with the object of providing military training for the scions of ruling and noble families. The Corps consists of about 20 young men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science. Its headquarters are at Dehra Dun.

Indian Military College.

Draft prospectus relating to the conditions of admission to the Prince of Wales Royal Indian Military College, Dehra Dun, were made available in December 1921. The college which will be under the direct control of the Commander-in-Chief will provide public school education on English lines for Indian youths who subsequently desire to enter the Royal Military College, Sandhurst, with a view to obtaining commissions in the Indian Army.

It is intended for those who wish to make army their profession in life, and parents or guardians of candidates will be required to furnish a declaration to this effect. The total number of students for the first year will be 40 and they will join the college on 20th February 1922. The fee will be Rs. 1,500 for each school year and this is liable to enhancement if the circumstances require.

The Strength of the Army.

The following table gives the average strength of European troops, Regulars and Territorials and the main facts as regards their health in 1919 with comparative figures for the quinquennial period 1910-14 and for the years 1915 to 1918 inclusive:

Period.	Average strength.	Admissions.	Deaths.	Invalids sent home.	Average constantly sick.
1910-14 average	69,440	39,389	303	483	2,094·57
1915	44,891	36,952	267	889	1,754·19
1916	60,737	46,892	397	1,343	2,414·56
1917	80,825	62,372	390	1,337	3,686·45
1918	87,982	90,637	1,424	2,007	5,286·61
1919	56,561	54,982	438	4,324	3,245·84

THE INDIAN TROOPS.

The average strength of Indian troops including those on duty in China and Nepal and other stations outside India, but excluding those on Field Service, was 229,731 in 1919 as compared with 341,458 in 1918.

The following table gives below the actuals and ratios of sickness, deaths, and invaliding for the quinquennial period 1910-14 and for the year 1915 to 1919 inclusive:—

Period	Average strength	Admissions.	Deaths.	Invalids.	Average constantly sick.	Ratio per 1,000 of strength.			
						Admissions.	Deaths.	Invalids.	Average constantly sick.
1910-14 average..	130,261	71,213	573	699	2,662	544·6	4·39	5·4	20·7
1915 ..	119,985	89,315	1,026	5,415	4,065	744·4	8·55	45·1	33·9
1916 ..	130,076	105,333	1,248	3,745	5,250	757·4	8·97	26·9	37·7
1917 ..	191,242	141,787	2,201	3,421	6,556	741·4	11·51	17·9	34·3
1918 ..	341,458	292,393	9,959	6,539	13,897	856·3	29·17	19·2	40·7
1919 ..	229,731	176,313	2,742	4,999	9,191	767·5	11·94	21·8	40·0

The Auxiliary Force.

A full account of the Indian Defence Force and of the various Acts under which it was formed and maintained appeared on pp. 160 165 of The Indian Year Book for 1920. After the war the question of perpetuating the principle of universal training for European British subjects, which distinguished the Indian Defence Force was discussed between the Government of India, the local Governments and representative bodies. The general opinion was that universal training might be retained under adequate safeguards, but the principle of compulsion was eventually abandoned owing to a representation of the Secretary of State that the retention of compulsory military service was not acceptable in view of the expressed opinions of the Imperial Government with regard to the general question of conscription throughout the world. It was, however, recognised that the needs of India, in the matter o an adequate auxiliary force trained to a reasonable standard of efficiency constituted the chief consideration, and the Secretary of State decided that if this consideration demanded the adoption of a system of universal training the matter was one for determination by the Indian Legislature in framing the new measure.

PROVISIONS OF THE BILL.

In the statement of objects and reasons accompanying the Bill to constitute an Auxiliary Force for service in India, which was introduced in August 1920, it is explained that the replacement of the Indian Volunteers Force, which had been in existence for nearly 60 years, by the Indian Defence Force, was a war measure necessitated by the exigencies of the situation. Compulsory service was adopted to meet the needs of an Imperial emergency. Reversion to voluntary enrolment is now considered desirable, but it is essential to maintain and develop in the reconstituted Volunteer Force, the improvements in organization and in the standard of training effected under war conditions.

The necessity for a substantial amendment of the Indian Volunteers Act, 1869, had long been apparent. Under that enactment, no definite obligations were imposed on enrolled men in the matter of training, and the standard of efficiency varied widely in different units. It is now proposed to secure the requisite amendment by the substitution of a new measure in which the liabilities of those enrolled in the matter of training and service are clearly defined.

The main principle underlying these provisions is that the European and domiciled community, being employed for the most part in the public services or in commercial and industrial occupations of importance, cannot be regarded as available for any but purely local service, and further that military training must be restricted as far as possible to the earlier years of service in the force. Moreover conditions differ greatly in different localities and for this reason it has been found desirable to adjust req irements in the matter of training to the local conditions obtaining. This adjustment will be effected through the agency of Advisory Committees for every military area, power of varying the training in individual cases being entrusted to these bodies.

The liability to local service only is subject to provision that, in circumstances of emergency to be notified formally by Government any part of the force may be required to serve beyond the limits of the military area to which it belongs, but in no case out of India.

Scale of Training.—No term of service is specified, as was the case under the Indian Volunteers Act, 1869. Any enrolled person desirous of discharge during the first six years of his service will be required to satisfy the local Advisory Committee as to the validity of his reasons for desiring to leave the Force; but after completing six years of service he may be discharged at any time on application being made to the Commanding Officer and no reference to higher authority will be required.

The scale of training laid down in the Bill is based on the principle already indicated. On attaining the age of 31, a member of the force is entitled to be passed into the First Class of the Reserve and thereupon to undergo training on a reduced scale. On attaining the age of 40, he will be included in the Second Class of the Reserve, and will then be required to complete the annual musketry course only. It is permissible, however, for any person in the Reserve to undertake, from year to year, the liabilities imposed on persons belonging to a higher class.

Discipline.—Members of the Force will be subject to the provisions of the Army Act when called out and when embodied, or when attached to or training with any part of the Regular Forces, this rule being the same as that applied to the Territorial Force in England. Military discipline on other occasions will be enforced either under the summary powers of the Commanding Officer, or, in the case of more serious offences and in any case should the person charged so elect, by means of the ordinary Criminal Courts. In no case can a Commanding Officer order any form of imprisonment as a summary or minor punishment, and no military offence (as specified in clause 24 of the Bill) is punishable with imprisonment by a Magistrate unless it constitutes an offence so punishable under the ordinary law.

Period of Training.—The Bill excuses from preliminary training all who have completed the preliminary training under the Defence of the Realm Act or have served for a period of six months in the forces, and it provides also that every enrolled person who is not a commissioned officer of the auxiliary force but is

entitled to rank as an officer of the forces shall undergo such periodical training as may be laid down in the regulations.

The three classes.—Enrolled persons it is proposed to include in one of three classes—the active class, the first class of the reserve, or the second class of the reserve. These three classes will be composed respectively of the following :—

Active: every such person who is required by section 9 to undergo preliminary training and has completed or is deemed to have completed the same shall be included in the Active Class until the end of the training year in which he attains the age of thirty-one years ;

First Reserve: every such person who has completed the period of service in the Active Class as required by clause (a) or is enrolled after attaining the age of thirty-one years and before attaining the age of forty years, shall be included in the First (A) Class of the Reserve until the end of the training year in which he attains the age of forty years ;

Second Reserve: every such person who has completed the period of service in the First (a) class of the Reserve as required by clause (b) or is enrolled after attaining the age forty years, shall be included in the Second (B) Class of the Reserve until discharged from the Auxiliary Force, India, as hereinafter provided.

Performance of Service—The Bill provides for the discharge from the force after six years' service or alternatively by a competent military authority, and while serving no member is required to perform military service except :—

(a) When called out with any portion of the Auxiliary Force, India, by an order of the senior military officer present either to act in support of the civil power or to provide guards which, in the opinion of such officer, are essential ; or

(b) when any portion of the Auxiliary Force, India, to which he belongs has been embodied to support or supplement His Majesty's regular force, in the event of an emergency by a notification directing such embodiment issued by the Governor-General in Council or any Local Government empowered by the Governor-General in Council in that behalf and published in the *Gazette of India* or the local official Gazette, as the case may be ; or

(c) when attached at his own request to any regular forces.

Fines.—Any enrolled persons refusing to perform military service when called out or embodied is liable to be handed over to the military authorities and any enrolled member who neglects to report to the unit to which he has been posted on enrolment, to attend for medical examination, or to notify change of residence is liable to a fine of fifty rupees. Punishment of other offences specified in the Bill may be in fines to the extent of two hundred rupees.

Details of Training.—The Bill further provides for the following training :—

1. PRELIMINARY—(a) for infantry, 32 days, and the annual musketry course as laid down in regulations ;

(b) for other branches, 40 days, and the annual musketry or gun course as laid down in regulations ;

2. PERIODICAL.—(1) Active Class. (a) for infantry, 16 days in each training year, and the annual musketry course as laid down in regulations ;

(b) for other branches, 20 days in each training year, and the annual musketry or gun course as laid down in regulations ;

(2) FIRST (A) CLASS RESERVE—(a) for infantry 6 days in each training year, and the annual musketry course, as laid down in regulations;

(b) for other branches 10 days in each training year and the annual musketry or gun course as laid down in regulations

(3) SECOND (B) CLASS RESERVE—(a) for infantry, (b) for other branches. The annual musketry course as laid down for this Class in regulations.

A day consists of four hours of actual military drill or instruction, and may be made up of fractions of a day not more than four in number.

The Bill embodying these principles passed through Select Committee without substantial alteration. It became law, and it is understood that the expected number of enrolments was voluntarily made in 1921.

INDIAN TERRITORIAL FORCE.

A Government of India communiqué in regard to the Auxiliary Force, which was published in August 1920, stated :—

"While the reorganisation of the long established volunteer force is merely a matter of removing old defects and bringing the conditions of an obsolete system training into line with modern requirements, the question of organising the almost unlimited manpower of India in some way for the defence of this great dependency is a larger question which presents many difficulties. The Government of India, in response to the aspirations of those who desire to see the formation of a second line to the Indian Army whereby in time of need these great resources can be utilised to strengthen the military forces of the Empire in a measure bearing some relation to the vast population of India, have under consideration a Bill to constitute an Indian Territorial Force on the model of the old militia in England, which the Home Government, with all the experience of the recent war before them, have now decided to revive. This must of necessity be purely experimental at the outset, and the success of the experiment will depend on the response made by the people of India to this offer. The essence of the scheme lies in the training of men by means of **annual embodiment for a short period** in successive years, this system having stood the test of centuries in England. In this manner it is hoped to give the force such preliminary training in peace as will enable it after a comparatively brief term of intensive

training to take its place side by side with the regular Indian Army in time of war, although it is not suggested that the force should be required to serve overseas. In the absence of ascertained data the scheme must be tentative in the first instance and consequently it is not possible to include in a Bill details as to the conditions of service and training. The matter has received close attention from the Army in India Committee, a decision on whose recommendation must be awaited. Following the English model men from 18 to thirty years of age would be enlisted for a period of six years, and after such preliminary training as may be found necessary a provincial unit would be embodied annually for twenty-eight days of continuous training under a supervising staff of regular British and Indian officers.

"The scheme would necessarily involve the **Training of Indian Officers** of the Territorial Force for the efficient performance of their duties, and for the ultimate attainment of higher rank. For this purpose facilities would be afforded to Indian officers of the force to train for short periods with regular units and to qualify for definite standards of proficiency. It will be recognised that as the time suggested for annual training must necessarily be reduced to a minimum, the training during that period would have to be intensive, and that when embodied, units of the Indian Territorial Force would have to aim at a standard of discipline and smartness as high as that of the regular army. Consequently it would be necessary to apply to the force so far as circumstances permit the rules and regulations applicable to the regular army.

"The retention of the present **University Corps** as a University Training Corps would form an integral part of the scheme. Special regulations and a special course of training would be laid down on the lines of those already in existence, as in this case training could not be concentrated into a single short period. The course for the University Training Corps might include 90 hours' drill for recruits, to be completed in the first six months after enlistment, and subsequently two hours' weekly throughout the college term with a short period at camp during the vacation. Enrolment might be for four or six years, as considered desirable but a member of the University Training Corps, on leaving the University, would have the option of continuing his service with the unit or of transfer to a territorial unit or of discharge. The proposals of the Government of India are admittedly based on the views expressed by members of the Army in India Committee, a body on which Indian opinion was adequately represented. It is recognised that the matter is one of the highest importance as regards the future defence of India and that the problem requires the fullest consideration especially by the classes more intimately affected."

Conditions of Service—Full details as regards the terms and conditions of service in the Indian Territorial Force, are to be found in the I.T.F. Act of 1920, and the rules under the Act, 1921, published by the Government of India. Shortly the main conditions are as follows:—

ENROLMENT.—Enrolment is for six years with the exception that men who have two years' approved service in a University Corps or three years' approved service in His Majesty's Indian Forces, may enrol for four years.

Applicants must be non-European British subjects or subjects of Native States, of good character and antecedents, and between the ages of 18 and 31, unless they have three years' approved service in His Majesty's Indian Forces when they may enrol up to 35 years of age. Applicants will not be accepted unless they are at least 5 ft. 1 in. in height, 32—34 inches round the chest and physically fit. Persons at present serving in the Indian Army Reserve or Imperial Service or State Troops cannot enrol in the Indian Territorial Force but pensioners if eligible, may enrol without detriment to their pension.

SERVICE.—Every person enrolled shall be liable to perform military service when called upon to do so, but shall not be required to serve beyond the limits of India save under a special or general order of the Governor-General in Council.

TRAINING.—Every person enrolled shall be liable to be called up for 56 days' training during his first year of service, and 28 days each year of service afterwards.

PAY AND ALLOWANCE.—Every person enrolled, when called up for service or training, shall be entitled to such pay and allowances as are for the time being admissible to corresponding ranks of His Majesty's Indian Forces.

DISCIPLINE.—Every person enrolled, when called up for service or training, shall come under the Indian Army Act of 1911, with certain modifications.

DISCHARGE.—Every person enrolled shall be entitled to receive his discharge on the expiration of the period for which he was enrolled unless for the time being engaged in military service.

MILITARY EXPENDITURE.

The following memorandum on Military Expenditure was submitted in March 1921:—

The net military expenditure in the coming year, as already announced in the Financial Statement, is 62·20 crores compared with 26·11 crores in 1913-14, the last year before the war. The signing of the armistice found India with an army approximately double the size of the pre-war army, though all expenditure in connection with the excess over normal pre-war establishments was borne by the Home Government. Circumstances have militated against any considerable permanent reductions up to the present owing to operations in Waziristan and unrest in adjacent countries. The military authorities have been guided by considerations of obligations which the army may be called to meet in defence of India from external aggression, and they have been hampered in the work of reorganisation, not only from the frontier campaign, but also by the simultaneous task of demobilising large numbers of men engaged for the period of the war and disbanding units which are returning from mandatory terri-

tories overseas They have also to get rid of considerable numbers of regular soldiers for whom there is untortunately no longer employment. Among the principal lessons of the war the evils of improvisation of staffs on mobilisation were clearly exemplified during the opening stages, and it would be folly to revert to a system which proved inadequate in war. The actual costs of fighting soldiers is increased. The silladar system, by which the sowar had to feed his own horse and clothe, feed and equip himself, has been changed, and throughout the Indian Army the State will in future pay to feed, house, mount and equip a soldier completely, thus abolishing the old system which amounted to a contract between the State and the commanding officer. Again before the war the ancillary services were not self-contained, most of them personnel being borrowed from fighting units, and the fighting strength of the army was therefore a paper strength, a proportion of the personnel being counted twice over both in their units and as members of an administrative service. The defects of this system came prominently to notice when the army was mobilised in 1914 In future it has been arranged that the ancillary services shall be fully organised and self contained in peace and the fighting services have been considerably reduced, the men withdrawn therefrom being now included in the ancillary services. The Royal Air Force, the Signal Corps and the Mechanical Transport Service are three new services which demand highly skilled technical personnel, who can command high rates of pay in civil life. The market rates for skilled mechanics, both in England and in India, are very high as compared with the rates before the war, and the present idea is to start schools in the army to train boys for these duties, but until these have been in existence long enough to provide an output, it is necessary to take trained skilled adults at practically whatever rate they demand.

HIGHER STANDARDS:—In the matter of capital expenditure, it is now generally admitted that prior to the war the standard of efficiency of the Army in India in respect of armament, equipment and military stores generally was dangerously low, and it would be unreasonable to refuse to adopt a scale of armament which was proved to be necessary during the great war and which was adopted primarily as a means of saving men's lives and reducing the incidents of casualties Besides all this, the necessity of improving the condition of the living of the soldier, both British and Indian, is generally recognised. The accommodation provided for all ranks before the war was devoid of the ordinary amenities and comforts of modern times. Hospitals were defective and requirements in respect of strategic communication, both by rail and road, water supply and facilities for concentration had not been fulfilled In all these directions Government found that much leeway had to be made up and in every direction enhanced expenditure is the result Expenditure on the salaries of British service officers has increased by seventy-one lakhs because before the war the British service did not, broadly speaking, offer a living wage for its officers For officers of the Indian service there is a reduction of about thirty lakhs due to reduction in numbers, the pay of officers of the Indian army having been materially increased There is an increase of about six crores for British soldiers for an establishment over 6,000 less, the pay of the British soldier in India having been increased nearly 200 per cent since 1914 There is an increase of about 14 lakhs only under the heading of Indian soldiers but it is for a total strength nearly 8,000 less than in 1913-14, the pay of the Indian soldiers having also been materially increased during the intervening period.

SPECIAL EXPENDITURE :—A sum of 124 lakhs has been allotted to the Royal Air Force, which did not exist before the war, and one crore has been set aside to meet gratuities and muster out allowances in view of the forthcoming reduction in the army in India. A sum of 128½ lakhs is provided for giving effect to certain recommendations of the Esher Committee Pensions show an increase of three crores and three crores has been set aside to meet the additional charges which it is calculated will be incurred in connection with the occupation of Waziristan, including provision for the construction of roads, accommodation and blockhouses, installation of electric plant, water supply and sanitary measures, the upkeep of certain additional transport and the grant of field service concessions, including extra rations, extra clothing and batta to troops and followers.

THE EAST INDIES SQUADRON.

Since 1903 a squadron of the Royal Navy, known as the East Indies Squadron, has been maintained in Indian waters. It has naturally varied in strength from time to time, and of late years in particular there have been several changes in its composition, the most recent being in the direction of strengthening it, owing to the disappearance of strength in the other squadrons of the Eastern Fleet. In 1903 the squadron consisted of one second class and three smaller cruisers and four sloops or gunboats. In 1906, when the policy of withdrawal from Eastern waters was inaugurated, it consisted of two second class and two third class cruisers, and remained at this strength until 1910: when one second class cruiser was withdrawn and two smaller vessels substituted, and three cruisers were lent from the Mediterranean to assist in the suppression of the arms traffic in the Gulf. By 1913 the position of the East Indies squadron had considerably improved. The battleship Swiftsure had taken the place of the second class cruiser which had been flagship, and a modern second class cruiser replaced the Perseus.

The Squadron in 1920.—The latest Navy List shows the composition of the Squadron (Fourth Light Cruiser Squadron) as follows:—Southampton (flag), Caroline, and Comus: Sloops Espiegle, Crocus and Cyclamen: and special service vessel Triad (S.N.O. Persian Gulf).

The proportion of contributions from the overseas Dominions towards naval expenditure is shown in the following table issued with the last Navy Estimates that gave details :—

Received from	Nature of Service.	Total.
		£
India ..	Maintenance of His Majesty's Ships in Indian Waters ..	100,000
	Indian Troop Service (on account of work performed by the Admiralty)	3,400
	Repayment on account of services rendered by His Majesty's Ships engaged in the suppression of the Arms Traffic in the Persian Gulf	64,000
Australian Commonwealth Dominion of Canada.	Contributions on account of liability for Retired Pay of Officers and Pensions of Men lent from the Royal Navy.	10,800
Australian Commonwealth.	Survey of the N. W. Coast of Australia	7,500
Do.	Maintenance of an Australasian Squadron and of a branch of the Royal Navy Reserve	41,600
Dominion of New Zealand	Maintenance of an Australasian Squadron and of the Imperial Navy generally, also of a branch of the Royal Naval Reserve	100,000
Union of South Africa ..	General maintenance of the Navy	85,000
Newfoundland ..	Maintenance of a branch of the Royal Naval Reserve ..	3,000
	Total ..	415,300

India's Marine Expenditure.

Since 1869 India has paid a contribution of varying amounts to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896-7, the subsidy of £100,000 a year, is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits, except with the consent of the Government of India. The expenditure amounts to nearly £400,000 annually.

ROYAL INDIAN MARINE.

The Royal Indian Marine (The Sea Service under the Government of India) traces its origin so far back as 1612 when the East India Company stationed at Surat found that it was necessary to provide themselves with armed vessels to protect their commerce and settlements from the Dutch or Portuguese and from the pirates which infested the Indian coasts. The first two ships, the Dragon and Hoseander (or Osiander), were despatched from England in 1612 under a Captain Best, and since those days under slightly varying titles and of various strengths the Government in India have always maintained a sea service.

The periods and titles have been as follows:—

Hon. E. I. Co.'s Marine ..	1612—1686
Bombay " ..	1686—1830
Indian Navy " ..	1830—1863
Bombay Marine	1863—1877
H. M. Indian Marine	1877—1892
Royal Indian Marine ..	1892, Present day.

The Marine has always been most closely connected with Bombay, and in 1668 when the E. India Co. took over Bombay, Captain Young of the Marine was appointed Deputy Governor. From then until 1877 the Marine was under the Government of Bombay, and although from that date all the Marine Establishments were amalgamated into an Imperial Marine under the Government of India, Bombay has continued to be the headquarters and the official residence of the Director.

War Service of the Marine.

1612–1717 Continuous wars against Dutch, Portuguese and Pirates for supremacy of West Coast of India. 1744 War with France, capture of Chandernagore, and French ship Indienne. In 1756 Capture of Castle of Gheria 1774 Mahratta War, capture of Tannah. Latter part of the eighteenth century, war with French and Dutch, Capture of Pondicherry, Trincomalee, Jafnapatam, Colombo, etc. 1801 Egyptian campaign under Sir Ralph Abercrombie. 1803 War with France. 1810 Taking of Mauritius and capture of French ship in Port Louis. Early part of the nineteenth century suppression of Jowasmi Pirates in the Persian Gulf. 1811 Conquest of Tara. 1813 Expedition against Sultan of Sambar. 1817-18 Mahratta War, capture of Forts at Severndroog. 1819 Expedition to exterminate piracy in the Persian Gulf. 1820 Capture of Mocha. 1821 Expedition against the Beni-koo-Ali Arabs. 1824-26 First Burma War. 1827 Blockade of Berbera and Somali Coast. 1835 Defeat of Beni Yas Pirates. 1838 Expedition to Afghanistan and capture of Karachi. 1838 Capture of Aden. 1840–42 War in China. 1843 Scinde War Battle of Meanee, capture of Hyderabad. 1845–46 Maori war in New Zealand. 1848–49 War in Punjab, siege of Mooltan. 1852 Second Burma War, Capture of Rangoon, Martaban, Bassein, Prome and Pegu. 1855 Persian War, capture of Bushire, Muhammerah and Ahwaz. 1856–57 War in China. 1857–59 The Indian Mutiny. 1859 Capture of the Island of Beyt. 1860 China War, Canton, Taku Forts, Fatshan and Pekin. 1871 Abyssinian War. 1882 Egyptian Campaign. 1885 Egyptian Campaign. 1885 Third Burma War 1889 Chin-Lshai Expedition. 1896 Suakin Expedition. 1897 Expedition to Imtirbe, Mombassa E. Africa. 1899–1902 S. African War. 1900–01 Boxer Rebellion in China

relief of Pekin, 1902-04, Somaliland Expendition, Suppression of Arms Traffic operations, Persian Gulf, 1912-14.

Service in the War 1914-18.—The Royal Indian Marine, though a small Service compared with the Army and Navy, has played a very active and conspicuous part in the European War. On the outbreak of the War the Service was under the administration of Captain (now Rear-Admiral) W. Lumsden, C.I.E., C.V.O., R.N. Director, Royal Indian Marine Captain Lumsden retired on the 12th of February 1918, and was succeeded by Captain N. F. J. Wilson, C.M.G., C.B.E., R.I.M., who held the post for the remainder of the period of the war

The first service performed by the Royal Indian Marine was the establishment at the large ports of Bombay, Calcutta, Aden, Karachi and Rangoon, of the Examination Services which in conjunction with the Military authorities safeguarded those ports from enemy action Most of the larger ships of the Royal Indian Marine which are in peace times unarmed, and are employed in carrying troops, etc., were armed and fitted in the Government Dockyard at Bombay, and handed over to the Royal Navy for services as Auxiliary Cruisers Most of the Royal Indian Marine personnel, both European and Indian, continued to serve on board these ships, some of which took part in actions. Early in 1915, the R.I.M.S. "Hardinge" took part in the defence of the Suez Canal and was struck by a Turkish 8-inch shell on the starboard side, carrying away the fore funnel and part of the bridge The "Comet" was sunk by the Turks during the battle of Ctesiphon in 1916. The "Lawrence" took part in the advance up the Tigris, and was in action at the taking of Kurna, and constantly under fire.

The chief service rendered by the Royal Indian Marine, however, has been in connection with **Marine transport** work. The Royal Indian Marine furnished base Transport staffs for Bombay, Karachi, Calcutta, Rangoon and Madras, as well as overseas staffs for Egypt, France, Mesopotamia and East Africa The fitting out of ships as Transports for the conveyance of Troops, animals, stores, etc., from India to the different theatres of War overseas and *vice versa*, the loading and unloading of ships, and the several duties connected therewith were also carried out by the Royal Indian Marine. The number of vessels taken up and fitted out in connection with the despatch of the first lot of troops from India numbered over 260, but this did not finish the task allotted to the Royal Indian Marine, as after the despatch of troops, the necessary seatransport for the carriage of reinforcements to all the theatres of War had to be arranged for. The number of troops, animals, and stores, conveyed by these ships is recorded in the Military Department of Government, but the mere details of numbers scarcely conveys any idea of the sustained efforts which the movement of these large numbers involved, and the work that was necessary to keep the vessels in a state of repair and efficiency, all of which fell on the Royal Indian Marine.

Neither the capacity of the two Royal Indian Marine Dockyards at Bombay and Calcutta, nor the personnel of the Royal Indian Marine, which was just sufficient for carrying on its functions during normal times, and perhaps in minor expeditions, could be expected to cope with the large amount of responsible work detailed above, and to carry it out expeditiously, and at the same time efficiently. The administrative staff of the Royal Indian Marine, however, rose to the occasion, and by engaging a large number of extra personnel, and with the help of the Royal Engineers' Department, Railways, and the Shipping Companies, performed the stupendous task with great credit to the Service, and to the benefit of the Empire.

Prize Ships.—On the outbreak of War, enemy vessels which were in Eastern Ports were seized and placed under the administration of the Director of the Royal Indian Marine. The number of vessels seized was 23 and this fleet represented a tonnage of over 1,00,000 and a value of over one million pounds sterling The arrangement for the employment of this fleet was not an easy task. The enemy crew had to be replaced and the ships manned and fitted as expeditiously as possible Though great difficulties were experienced, this was accomplished without any loss of time and the vessels were detailed for different duties. Very little is known to the public outside of the use which has been made of these Prizes. The valuable services rendered by this Fleet, and the important part it has played in the operations of the War, cannot be too highly spoken of. Besides the general Transport Service, they have performed duties as Colliers, Depot Ships, Prison Ships, Convalescent and Hospital Ships It will be interesting to note that ships of the Bombay Prize Steamship Section were the first German Prizes to be utilised in the whole of the Empire In order to relieve the congestion of cargo at Indian Ports due in a great measure to the removal of private vessels from Indian Trade for Imperial Transport Work, the Prize Ships for some time were also employed commercially. The Prize Ship Fleet also sustained together with the shipping of the world its quota of losses due to enemy action, though fortunately the casualties in the personnel have been very few. The officers, engineers, and crew of the Merchant Service by whom the vessels are manned maintained the best traditions of the Services to which they belong, by their devotion to duty. Many of them earned an honourable mention in the official despatches.

River Transport.—In addition to the fitting out of vessels, arranging for their despatch and for the Transport Staff, the management of Prize Steam Ships, etc., the Royal Indian Marine Service was called upon to provide River Transport for the advance of the British Force in Mesopotamia, and also to organise a River Transport Service in that country. The difficulties encountered in obtaining suitable river craft in India capable of navigating the Tigris and Euphrates are well known and need not be recapitulated. As, however, the demand was insistent such vessels as most nearly approximated to the required dimensions were taken up in India and despatched in tow to Mesopotamia. The despatch of

this huge flotilla, which numbered over 800 vessels and barges, over a distance varying between 1,600 to 3,000 miles was a big undertaking and was not carried through without loss, owing to the frail nature of many of the craft which were unfitted to face sea conditions. With these craft as they arrived, a River Service was organised by the Royal Indian Marine, and when the conduct of operations was taken over by the War Office in August, 1916, they found a river transport service in existence, the efficiency of which their Officers have frequently recognised. R. I. M. Officers served during the War in all theatres, *i.e.*, The Grand Fleet, France, North Sea, Mediterranean, Salonica, Palestine, Egypt, Red Sea, Mesopotamia, East Africa.

The first Director of I.W.T. in France Brig.-General G. S. Holland, C.B., C.I.E., D.S.O., was a retired R. I. M. Officer. He was succeeded by Brig.-General C Tuck, C.M.G., D.S.O., also a retired R. I. M. Officer.

At the commencement of the war in Mesopotamia the only chart of the Tigris up to Baghdad was the work of a R. I. M Officer The Marine Survey of India were employed at the commencement of operations in the surveys of rivers and lakes. India, however, continued to be the base of supply of troops and stores for Mesopotamia, and the fact that the War Office took over the operations, did not therefore relieve the strain on the Royal Indian Marine Services, whose work in carrying for tonnage, personnel for ships, transport staff, etc, continued. The actual numbers of craft taken up and despatched to Mesopotamia were 1,093, including River Steamers, Tugs, Launches, Barges, Motor Boats of every size and description. The Royal Indian Marine also transferred 213 Officers (38 Permanent, 175 Temporary) to the War Office for service in Mesopotamia, when the latter assumed charge of the operations.

Work of the Dockyards.—Such is a brief record of the services rendered by the Royal Indian Marine Service to the Empire in this great war, but the record cannot be considered even partially complete, without special reference to the work of the Dockyards These two establishments of inestimable value during the war. Besides undertaking the survey and fitting out of numbers of transports, the plans for fitting out by private firms of the remainder were all prepared by the Dockyard Officers, and their completion supervised by them. The immense flotilla for Mesopotamia nearly all passed through Dockyard hands, where they were docked, repaired and prepared for their sea voyage. Almost of greater importance are the repairs and overhaul of the East Indies Naval Squadron which is almost entirely dependent on Bombay Dockyard, for its repairs and stores. The fitting out of the **mine-sweeping** Flotilla was another of its energies and the building of six Trawlers for the same work was undertaken. In addition a considerable number of Barges, Oil flats, steam launches and Boats were built for Mesopotamia.

In consequence of the discovery that an enemy vessel had laid mines in Eastern Waters, the Royal Indian Marine was called upon in February, 1917, to organise a Patrol and Mine sweeping Service round the coast of India Royal Indian Marine and Merchant Vessels were fitted up and utilised for the purpose. They were manned by Royal Indian Marine and Merchant Service personnel, but for certain purposes were placed under the orders of the Commander-in-Chief, East Indies, in April 1918.

In addition to this and the Examination Service, the Royal Indian Marine supplied the personnel for a Patrol Service in the Bay of Bengal and on the Burma Coast to deal with the threat of the importation of arms into India. This Service remained in active employ until the danger was considered at an end.

Mention was made in Parliament of the good services rendered by the Royal Indian Marine in the War, and a large number of Royal Indian Marine Officers have been the recipients of honours for meritorious services, and both, they and other Royal Indian Marine personnel have several times been mentioned in despatches. The services of Warrant Officers and Crews have also been recognised by Government, by the grant of medals and in different other ways. 21 Officers, 9 Warrant Officers, and nearly 300 ratings have given their life in this War.

The numbers of Officers and Warrant Officers who have been the **recipient of honours** or been mentioned in despatches are as follows :—

OFFICERS.

Created	C. M. G.	.. ..	4 Officers.
,,	C. I. E.	.. ..	7 ,,
,,	C. B. E.	.. ..	1 Officer.
,,	O. B. E.	.. ..	18 Officers.
,,	M. B. E.	.. ..	3 ,,
Awarded the	D. S. O.	.. ..	12 ,,
,,	D. S. C.	.. ..	12 ,,
Mentioned in Despatches		.. ..	29 ,,

WARRANT OFFICERS.

Warrant Officers, M.B E...	..	2 Officers.
Mentioned in Despatches	..	12 ,,

Personnel, 1921.

DIRECTOR.

Rear-Admiral Henry L Mawbey, C B, Office Residence, Royal Indian Marine Dockyard Bombay.

(The Director, R.I.M., advises the Government of India on all maritime matters.)

DEPUTY DIRECTOR.

Capt. E. J. Headlam, C.M.G., D.S.O , A.D.C., R.I.M.

OFFICERS.

Captains	9
Commanders	24
Lieutenants and Sub-Lieutenants ..	84
Engineer Captain	1
Engineer Commanders	10
Engineer Lieuts. and Sub-Lieutenants ..	75
Midshipmen	12

WARRANT OFFICERS.

Gunners	24
Clerks	22
Wireless Operators	11
Engine Drivers	2

PETTY OFFICERS AND MEN.

2,225 Recruited from the Ratnagiri District of the Bombay Presidency.

SHIPS.

Troopships ..	.. R. I. M. S.	Dufferin	.. 8,260 tons	..	10,191 Horse Power.	
„	„	Hardinge	.. 6,350 „	..	9,366 „	
„	„	Northbrook.	6,100 „	..	7,249 „	
Light-house Tender ..	„	Nearchus	.. 925 „	..	753 „	Persian G.
Station Ship	„	Dalhousie	.. 2,195 „	..	2,200 „	Aden.
„	„	Clive	.. 2,100 „	..	2,422 „	Burma.
„	„	Minto	.. 1,152 „	..	2,025 „	Andaman Islands
Despatch Vessel ..	„	Lawrence	.. 1,259 „	..	2,020 „	Persian G.
Surveying Ship ..	„	Investigator	.. 1,185 „	..	1,500 „	
„	„	Palinurus	.. 444 „	..	486 „	
Receiving Ship ..	„	Canning	.. 1,316 „	..	1,277 „	Bombay.
River Steamer	„	Bhamo	.. 172 „	..	250 „	burma.
„	„	Sladen	.. 560 „	..	360 „	„

In addition to the above are 39 launches composed of service launches, target towing tugs, powder boats, military service launches, etc.

Dockyards.

There are two Royal Indian Marine Dockyards at Bombay and at Calcutta, the former being the more important. There are 5 graving docks and a wet basin at Bombay, together with factories which enables the whole of the repairs for the ships of the East India Squadron of the Royal Navy and for the ships of the Royal Indian Marine and local Governments to be carried out, and tugs, lightships, pilot schooners, launches, etc, constructed.

PRINCIPAL OFFICERS, BOMBAY DOCK YARD.

R. I. M. Officers

Commander of the Yard, Comdr. C. A. Scott, D.S.O., R.I.M

Chief Engineer of the Yard, Engr.-Capt. W. C. Constable, O.B.E., R.I.M.

CIVILIAN OFFICERS.

Chief Constructor, Mr. E. P. Newnham, C.I.E.

Constructor, Mr. F. Williams.

Appointments.

In addition to the regular appointments in the ships of the Royal Indian Marine, and in the R. I. M. Dockyards, the following appointments under local Governments are held by officers in the Royal Indian Marine :—

BOMBAY.

Port Officer, Assistant Port Officer, Principal Engineer and Ship Surveyor and 2nd and 3rd Engineers and Ship Surveyors to the Government of Bombay.

CALCUTTA.

Port Officer, Deputy Port Officer and Assistant Port Officer, Principal 2nd and 3rd Engineers and Ship Surveyors to the Government of Bengal.

BURMA.

Principal Port Officer, Burma, First & Second Assistant Port Officers, Rangoon. Principal Engineer and Ship Surveyor to Government of Burma.

Assistant Do. do. do. do.

Port Officer, Akyab, Moulmein and Bassein Marine Transport Officer, Mandalay, and Superintending Engineer, Mandalay.

MADRAS.

Presidency Port Officer and Deputy Conservator of the Port.

CHITTAGONG.

Port Officer, and Engineer and Ship Surveyor.

ADEN.—Port Officer.

KARACHI.—Port Officer.

PORT BLAIR.—Engineer and Harbour Master.

Finance.

The task of attempting to give any clear idea of the present state of Indian finance is extraordinarily difficult. By a slow process of evolution there had gradually grown up a more marked division between the finances of the Government of India and the finances of the great Provincial administrations, all leading towards greater provincial autonomy. But the finances of the Provinces were still included in the budget of the Government of India. Under the Reform Act of 1919 this separation was made absolute. The Provinces received entire control of certain heads of revenue, such as land revenue, excise, and other branches. In return they were called upon to make a contribution to the revenues of the Government of India, fixed in each Province, the actual figures being set out in the section dealing with the Government of India (q. v.). The Government of India also absorbed the whole proceeds of other heads of revenue, such as Customs, railway profits, and the major portion of the Income Tax. This is avowedly a transient expedient, it being intended that the separation shall ultimately be made still more arbitrary, for the provincial contributions to the revenues of the Government of India are intended some day to cease; in practice the Government of India have already had to make some abatements to necessitous Provinces.

Exchange:—Another complexity introduced in the Budget has arisen from the variations in the rate of Exchange. From 1898 onwards there was for all practical purposes stability in the rate of exchange of the rupee which was fixed at one shilling and four pence, or fifteen rupees to the pound sterling. But in the second year of the war, for reasons which are fully set out in the section on the Currency (q. v.), the rate of exchange began to rise. The primary cause of this rise was a large balance of trade and indebtedness in India, which could not be liquidated either by imports of bullion or credits abroad of the ordinary character, and a rise in the price of silver which made it impossible to coin rupees, for which there was an immense demand, at fifteen to the pound sterling without immense loss. But these later fluctuations did not introduce any complexities in the Budget, where the fixed rate of fifteen to one was maintained and any improvement on that rate was credited to revenue as a profit on exchange. But in 1920 quite another story was told. Acting on the recommendations of a Currency Committee which sat in 1919 and reported in December of that year, the Government of India adopted measures designed to fix the rupee at two shillings gold. Owing to the variations in the dollar-sterling exchange this forced the rupee as high as two shillings and ten pence half penny: and when the official policy failed, it was found that it had cost the exchequer Rs. 35 crores of rupees and the rupee fell as low as one and three pence eleven-sixteenths. After that greater stability was attained, and all official measures having been withdrawn, the rupee has become fairly stable at or about the old ratio of fifteen to one. But the tangle which the official policy entailed has not yet been straightened out. Certain securities which the Government of India held as a backing for the Paper Currency were revalued at the new ratio of ten to one. The figures based on this revaluation are now fictitious. Then in fixing what are called The Home Charges—that is the sum which the Government of India has to pay in London on account of interest on the debt, pay and pensions, and capital charges—a rate of transfer has to be adopted. In the Budget for the current year this rate is taken at one shilling and eight pence. It has not been realised; indeed it is doubtful whether a higher rate than one and four pence will be reached. Until therefore this tangle is unravelled, which may take some years, certain heads in the Budget are fictitious and allowance must be made therefor.

The Budget of 1920-21:—In presenting his Budget the Finance Member said that a year before he was able to record a period of considerable prosperity. There were certain anxieties in regard to the heavy load of floating debt, the inflation of the currency, and liabilities for war bonds of early maturity, but the outlook was bright. There was a general trade boom in the countries of the world though there were signs that the boom rested on no firm foundation. In the result the balance of trade in favour of India had risen to heights previously undreamt of. The 1919 monsoon was an excellent one, the public revenues had grown considerably, and the only seriously disturbing event was the cost of the Afghan war, which had converted a small surplus into a deficit of Rs. 23 crores. But the trade boom passed with uncanny rapidity, leaving behind it a severe trade depression. The rise in the rupee induced an immense import trade, with the result that the markets were overstocked. The power of India's principal customers to purchase her produce was severely curtailed. The large balance of trade in India's favour was converted into an adverse balance. The monsoon of 1920 was also unfavourable, the rainfall being twelve per cent. in defect. On top of these factors, and in consequence of them—though the incidence was exaggerated by the administrative action taken—came the decline in the Exchange which has already been mentioned.

A Big Deficit:—The effect of these forces was to leave the Government of India with a big deficit. The budget anticipated a revenue of 132 crores, an expenditure of 130 crores and a surplus of 2 crores. Certain adjustments had to be made, and allowing for these if the expectations on which the budget was framed had been realised, the year should have closed with a surplus of 10½ crores. But so far were the expectations from being realised that there

was a deficit of 11¾ crores, showing a total deterioration of 22 crores. The causes of this falling off are shown in the following table:—

(Crores.)

Customs revenue more			+7.3
Railways (inclusive of adjustment for exchange) worse			—7.6
Income-tax revenue more	Excess profits	1¾	+3.9
	Super-tax	1	
	Income-tax	1½	
Military expenditure more			-15·2
Profit on wheat purchases			+.9
Exchange charged to non-commercial revenue heads			—2.6
Paper Currency Reserve interest less			—1
Interest charges on debt more			—2·5
Land revenue less			—1·4
Opium revenue less			—·8
Net revenue from posts and telegraphs less			—·8
Other variations, representing mainly increases in civil expenditure			- 2·5
Net variation from budget			- 22 3

Budget for 1921-22:—The estimates for the current year provide for an expenditure chargeable to the Government of India of 129 crores, as against a revenue on the existing basis of taxation—including a contribution from the Provincial Governments of 98·3 lakhs of 110¼ crores. An item which loomed large in the estimated expenditure was the provision for Defence. The budget provided for an ordinary expenditure on the Indian Army of 58·20 crores, representing the minimum which the authorities were able to put forward. There were also four crores of extraordinary expenditure, 3 crores representing the special expenditure necessitated by the occupation of Central Waziristan and one crore representing the grant of compensatory concessions to troops disbanded under proposals for the reduction of establishments. In the end there remained this actual deficit on the accounts of 18 crores, which with the provision of a surplus of 1 crore necessitated the imposition of new taxation to the extent of 19 crores.

New Taxation:—The taxation proposals of the Finance Member are summarised under the following heads.

An increase in the general *ad valorem* duty of 7½ per cent. to 11 per cent. estimated to produce 3,84 lakhs;

A levy on matches of a specific duty of 12 annas per gross boxes, producing an additional 1,10 lakhs;

An increase in the duty on imported liquors, working out to 3 annas per degree of proof per gallon, yielding an increased revenue of 94 lakhs;

The raising of the *ad valorem* duty of 7½ per cent. to 20 per cent. on certain articles of luxury, such as motor cars, etc., producing an additional 1,14 lakhs;

An increase in the duty on foreign sugar from 10 to 15 per cent., yielding 65 lakhs;

An increase in the duty on manufactured tobacco to fifty per cent. producing 40 lakhs.

These were all the tariff changes. There was proposed, in addition, the raising of the surcharge on railway traffic to produce 5½ crores. An increase in postal charges to produce 2¼ crores.

These additional taxes were estimated to produce 16 crores. Then dealing with the payer of direct taxes certain changes were proposed in the Income tax. On this point the Finance Member said: "As regards ordinary Income-tax an examination of the figures show that even if it were not undesirable to do so we should not obtain much additional revenue by raising the present rates of the tax on the smaller incomes. We propose therefore to leave the lower grades of Income-tax alone and to increase the upper grades so as to lead to a maximum of 16 pies instead of 12 pies as at present. The result will be to increase substantially the tax on companies dividends for under the income-tax law the tax is levied on dividends at the maximum rate subject to certain refunds. As regards super tax on individuals we propose to increase the rates on higher grades of income so as to work upto a maximum of 4 annas in the rupee on any excess over 3½ lakhs of income. We estimate that the increases in income-tax and super-tax combined will yield a total additional revenue of 3¼ crores."

Capital Account:—Owing to its responsibility for financing railways and other public works, and of meeting charges in London, the Government of India has an important capital side to its Budget, which is known by the name of ways and means. This is of special interest to financiers, for it states the estimated borrowings of the Government and has a considerable influence on the rate of exchange. The ways and means section of the current budget is set out in the following statement:—

Capital requirements.

(Crores.)

(*i*) Railway capital outlay (inclusive of exchange)	17 8
(*ii*) Delhi capital outlay (inclusive of exchange)	1 1
(*iii*) Discharge of debt (War Bonds).	16·2
(*iv*) Loans to Provincial Governments	1·7
(*v*) Drawings by Provincial Governments from their balances	6·3
Total	43·1

Resources from which met.

(*vi*) Reduction of cash balances	6·6
(*vii*) Rupee loan	15·0
(*viii*) Sterling loan	5·0
(*ix*) Net receipts from Savings Bank Deposits and Cash Certificates	4·2
(*x*) Recovery in respect of money orders issued by Iraq Administration in 1919-20	3·5
(*xi*) Imperial surplus	·8
(*xii*) Net credit from exchange	5·0
(*xiii*) Other items	3·0
Total	43·1

Reception of the Budget —Although there was sharp criticism of the high military expenditure, which the Legislatures are determined to reduce, and much groaning over the new taxation, the reception given to the budget was not unfavourable. Under the Reform Scheme the Legislative Assembly has the power to vote certain heads of expenditure, and entire control over the legislation necessary to impose fresh taxes in the shape of tariff bills. Notwithstanding the fact that in its very first session the Assembly was confronted with this demand for the heaviest additional taxation in the history of the Government of India, it addressed itself to the task in a spirit of sober patriotism. The new taxation proposals were passed substantially as proposed, with certain modifications in the new Customs Schedule and in the increased postal charges. The new schedule is set out in the Customs Tariff (q. v.) and in the section which deals with Posts and Telegraphs (q v) When the Budget left the Legislative Assembly it provided for a total revenue of Rs 1,28,31,43,000; an expenditure of Rs. 1,27,60,43,000; and a surplus of 71,00,000.

At the time of writing there is every sign that the position will be worse than this, and that when the Finance Member presents his statement of income and expenditure so far from there being this small surplus there will be a considerable deficit. The ways and means section will be far worse than that stated above, it for no other reason because instead of the average rate of exchange being one and eight pence as estimated it will be about one and four pence.

The details of the budget are set out in the following table. As the manner in which the great heads of income like land revenue, railways, irrigation and customs are realised is described in separate articles (*q. v.*) they need not detain us here:—

	Accounts, 1919-1920.	Revised Estimate, 1920-1921.	Budget Estimate, 1921-1922.
REVENUE	£	£	£
Principal Heads of Revenue—			
Customs	21,16,69,935	32 37,80,000	37,73,28,000
Taxes on Income	22,43,41,180	19,77,78,000	18,58,07,000
Salt	5,70,83,914	6,14,93,000	7,00,66,000
Opium	4,55,61,793	3,62,31,000	3,73,85,000
Other Heads	2,28 51,068	2,34,01,000	2,44,80,000
TOTAL PRINCIPAL HEADS	56,45,07,890	64,26,83,000	69,49,66,000
Railways: Net Receipts	31,76,99,344	25,69,32,000	27 25,63,000
Irrigation Net Receipts	4,77,574	4,23,000	4,24,000
Posts and Telegraphs Net Receipts	2,95,81,944	1,68,64,000	2,08,74,000
Debt Services	4,22,99,265	3 74,30,000	3,49,09,000
Civil Administration	62,16,507	75,08 000	76,35,000
Currency, Mint and Exchange	5,71,29 369	2,86,06,000	49,73,000
Buildings, Roads and Miscellaneous Public Improvements	10,04,444	11,42,000	10,38,000
Miscellaneous	1,74,58,075	2,13,00,000	7,52,76,000
Military Receipts	3,90,52,245	3,37,02,000	4,11,10,000
Contributions and Assignments to the Central Government by Provincial Governments.	9,83,00,000	9,83,00 000	12 93,75,000
TOTAL REVENUE	1,17,37,26,657	1,14,48,90,000	1,28,31,43,000
DEFICIT	20,81,89,830	20,45,79,000	....
TOTAL	1,38,19,16,487	1,34,94,69,000	1,28,31,43,000
EXPENDITURE			
Direct Demands on the Revenues	3,50,93,737	3,90,86,000	4,93,51,000
Railways. Interest and Miscellaneous Charges	17,95,97,900	21,13,94,000	23,17,13,000
Irrigation	18,18,368	11,97,000	11,76,000
Posts and Telegraphs Capital Account	60,13,961	1,73,40,000	98,02,000
Debt Services	13,58,92,647	13,77,38,000	13,08,61,000
Civil Administration	8,00,04,809	9,18,96,000	8,43,18,000
Currency, Mint and Exchange	96,50,031	3,77,66,000	4,18,80,000
Buildings, Roads and Miscellaneous Public Improvements	1,49,89,301	1,78,15,000	1,51,11,000
Miscellaneous	3 99,99,390	4,52,34,000	4,24,37,000
Military Services	87,25,32,343	74,36,79,000	66,31,10,000
Miscellaneous adjustments between the Central and Provincial Governments	63,24,000	63 24,000	62,84,000
TOTAL EXPENDITURE CHARGED TO REVENUE	1,38,19,16,487	1 34,94,69,000	1,27,60,43,000
SURPLUS	....	....	71,00,000
TOTAL	1,38,19,16,487	1,34,94,69,000	1,28,31,43,000

THE LAND REVENUE.

The principle underlying the Land Revenue system in India has operated from time immemorial. It may be roughly formulated thus—the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. On strictly theoretical grounds, exception may be taken to this statement of the case. It serves, however, as a substantially correct description of the relation between the Government and the cultivator. The former gives protection and legal security. The latter pays for it according to the value of his holding. The official term for the method by which the Land Revenue is determined is "Settlement." There are two kinds of settlements in India—Permanent and Temporary. Under the former the amount of revenue has been fixed in perpetuity, and is payable by the landlord as distinguished from the actual cultivator. The Permanent Settlement was introduced into India by Lord Cornwallis at the close of the eighteenth century. It had the effect intended of converting a number of large revenue farmers in Bengal into landlords occupying a similar status to that of landowners in Europe. The actual cultivators became the tenants of the landlords. While the latter became solely responsible for the payment of the revenue, the former lost the advantage of holding from the State. This system has prevailed in Bengal since 1795 and in the greater part of Oudh since 1859. It also obtains in certain districts of Madras.

Temporary Settlements.

Elsewhere the system of Temporary Settlements is in operation. At intervals of thirty years, more or less, the land in a given district is subjected to a thorough economic survey, on the basis of the trigonometrical and topographic surveys carried out by the Survey Department of the Government of India. Each village area, wherever the Temporary Settlement is in vogue, has been carefully mapped, property-boundaries accurately delineated, and records of rights made and preserved. Under the Permanent Settlement in Bengal the occupant does not enjoy these advantages. The duty of assessing the revenue of a district is entrusted to Settlement Officers, members of the Indian Civil Service specially delegated for this work. The duties of a Settlement Officer are thus described in Strachey's *India* (revised edition, 1911):—"He has to determine the amount of the Government demand, and to make a record of all existing rights and responsibilities in the land. He has a staff of experienced subordinates, almost all of whom are natives of the country, and the settlement of the district assigned to him is a work which formerly required several years of constant work. The establishment of agricultural departments and other reforms have however led to much simplification of the Settlement Officer's proceedings, and to much greater rapidity in the completion of the Settlements. All the work of the settlement officer is liable to the supervision of superior officers, the assessments proposed by him require the sanction of the Government before they become finally binding; and his judicial decisions may be reviewed by the Civil Courts. It is the duty of the settlement officer to make a record of every right which may form the subject of future dispute, whether affecting the interests of the State or of the people The intention is to alter nothing, but to maintain and place on record that which exists."

The Two Tenures.

Under the Temporary Settlement land tenures fall into two classes—peasant-holdings and landlord-holdings, or *Ryotwari* and *Zemindari* tenures. Broadly speaking, the difference between the two in a fiscal sense is that in Ryotwari tracts the *ryot* or cultivator pays the revenue direct: in *Zemindari* tracts the landlord pays on a rental assessment. In the case of the former, however, there are two kinds of *Ryotwari* holdings—those in which each individual occupant holds directly from Government, and those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue on the whole village area. This latter system prevails in the North. In Madras, Bombay, Burma and Assam, ryotwari tenure is on an individual basis, and the Government enters into a separate agreement with every single occupant. The basis of assessment on all classes of holdings is now more favourable to the cultivator than it used to be. Formerly what was believed to be a fair average sum was levied on the anticipated yield of the land during the ensuing period of settlement. Now the actual yield at the time of assessment alone is considered, so that the cultivator gets the whole of the benefit of improvements in his holding subsequently brought about either by his own enterprise or by "unearned increment" The Government, however, may at a new settlement re-classify a holding so as to secure for itself a fair share in an increment that may have resulted from public works in the vicinity, such as canals and railways, or from a general enhancement of values. But the principle that improvements effected by private enterprise shall be exempt from assessment is now accepted by the Government and provided for in definite rules.

Incidence of the Revenue.

The incidence of the revenue charges varies according to the nature of the settlement, the class of tenure, and the character and circumstances of the holding. Under the Permanent Settlement in Bengal Government derive rather less than £3,000,000 from a total rental estimated at £12,000,000. Under Temporary Settlements, 50 per cent. of the rental in the case of *Zemindari* land may be regarded as virtually a maximum demand. In some parts the impost falls as low as 35 and even 25 per cent. and only rarely is the proportion of one-half the rental exceeded. In regard to *Ryotwari* tracts it is impossible to give any figure that would be generally representative of the Government's share. But one-fifth of the gross produce is the extreme limit, below which the incidence of the revenue charge varies greatly. About sixteen years ago the Government of India were invited in an influ-

entially signed memorial to fix one-fifth of the gross produce as the maximum Government demand. In reply to this memorial and other representations the Government of India (Lord Curzon being Viceroy) issued a Resolution in defence of their Land Revenue Policy. In it was stated that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact" and "the average rate is everywhere on the down grade." This Resolution, together with the statements of Provincial Governments on which it was based, was published as a volume; it is still the authoritative exposition of the principles controlling the Land Revenue Policy of the Government of India In a series of propositions claimed to be established by this Resolution the following points are noted:—(1) In *Zemindari* tracts progressive moderation is the key-note of the Government's policy, and the standard of 50 per cent. of the assets is more often departed from on the side of deficiency than excess; (2) in the same areas the State does not hesitate to interfere by legislation to protect the interests of the tenants against oppression at the hands of the landlords; (3) in *Ryotwari* tracts the policy of long-term settlements is being extended, and the proceedings in connection with new settlements simplified and cheapened; (4) local-taxation (of land) as a whole is neither immoderate nor burdensome; (5) over-assessment is not, as alleged, a general or widespread source of poverty, and it cannot fairly be regarded as a contributory cause of famine. At the same time the Government laid down as principles for future guidance—(*a*) large enhancements of revenue, when they occur, to be imposed progressively and gradually, and not *per saltum*; (*b*) greater elasticity in revenue collection, suspensions and remissions being allowed according to seasonal variations and the circumstances of the people; (*c*) a more general resort to reduction of assessments in cases of local deterioration

Protection of the Tenants.

In regard to the second of the five propositions noted above, various Acts have been passed from time to time to protect the interests of tenants against landlords, and also to give greater security to the latter in possession of their holdings. The Oudh Tenancy Act of 1886 placed important checks on enhancement of rent and eviction, and in 1900 an Act was passed enabling a landowner to entail the whole or a portion of his estate, and to place it beyond the danger of alienation by his heirs. The Punjab Land Alienation Act, passed at the instance of Lord Curzon, embodied the principle that it is the duty of a Government which derives such considerable proportion of its revenue from the land, to interfere in the interests of the cultivating classes. This Act greatly restricted the credit of the cultivator by prohibiting the alienation of his land in payment of debt. It had the effect of arresting the process by which the Punjab peasantry were becoming the economic serfs of money-lenders. A good deal of legislation affecting land tenure has been passed from time to time in other provinces, and it has been called for more than once in Bengal, where under the Permanent Settlement (in the words of the Resolution quoted above), "so far from being generously treated by the Zemindars, the Bengal cultivator was rack-rented, impoverished, and oppressed."

Government and Cultivator.

While the Government thus interferes between landlord and tenant in the interests of the latter, its own attitude towards the cultivator is one of generosity. Mention has already been made of the great advantage to the agricultural classes generally of the elaborate systems of Land Survey and Records of Rights carried out and maintained by Government In the Administration Report of Bombay for 1911-12, it is stated:—"The Survey Department has cost the State from first to last many lakhs of rupees. But the outlay has been repaid over and over again. The extensions of cultivation which have occurred (by allowing cultivators to abandon unprofitable lands) have thus been profitable to the State no less than to the individual: whereas under a *Zemindari* or kindred system the State would have gained nothing however much cultivation had extended throughout the whole of 30 years' leases." On the other hand, the system is of advantage to the *ryots* in reducing settlement operations to a minimum of time and procedure. In the collection of revenue the Government consistently pursues a generous policy. In times of distress suspensions and remissions are freely granted after proper inquiry.

Land revenue is now a provincial head of revenue and is not shown in the All India accounts It may be taken roughly at £28 million, as compared with £84 million said to have been raised annually by Aurungzebe from a much smaller Empire.

The literature of the subject is considerable. The following should be consulted by readers who require fuller information:—"Land Revenue Policy of the Indian Government," 1902 (Superintendent of Government Printing); Baden Powell's "Land Systems of British India"; Sir John Strachey's "India, its Administration and Progress, 1911," (Macmillan & Co.); M Joseph Chailley's "Administrative Problems of British India" (Macmillan & Co., 1910), and the Annual Administration Reports of the respective Provincial Governments.

EXCISE.

The Excise revenue in British India is derived from the manufacture and sale of intoxicating liquors, hemp, drugs, toddy and opium. It is a commonplace amongst certain sections of temperance reformers to represent the traffic in intoxicating liquors as one result of British rule. There is, however, abundant evidence to show that in pre-British days the drinking of spirituous liquors was commonly practised and was a source of revenue.

The forms of intoxicating liquor chiefly consumed are country spirit; fermented palm juice; beer made from grain; country brands of rum, brandy, etc., locally manufactured malt beer and imported wine, beer and spirits. Country spirit is the main source of revenue, except in the Madras Presidency, and yields about two-thirds of the total receipts from liquors. It is usually prepared by distillation from the Mhowra flower, molasses and other forms of unrefined sugar, fermented palm juice and rice. In Madras a very large revenue is derived from fresh toddy. The British inherited from the Native Administration either an uncontrolled Out-Still System or in some cases a crude Farming System and the first steps to bring these systems under control were the limitation of the number of shops in the area farmed, and the establishment of an improved Out-Still System under which the combined right of manufacture and sale at a special shop was annually granted. This of course was a kind of control, but it only enabled Government to impose haphazard taxation on the liquor traffic as a whole by means of vend fees. It did not enable Government to graduate the taxation accurately on the still-head duty principle nor to insist upon a standard of purity or a fixed strength of liquor. Moreover for political and other reasons the extent of control could not at first be complete. There were tribes of aborigines who regarded the privilege of making their own liquor in their private homes as a long established right; and who believed that liquor poured as libations to their god should be such as had been made by their own hands. The introduction of any system amongst those peoples had to be worked very cautiously. Gradually, as the Administration began to be consolidated, the numerous native pot-stills scattered all over the country under the crude arrangements then in force began to be collected into Central Government enclosures called Distilleries, thus enabling Government to perfect its control by narrowing the limits of supervision; and to regularize its taxation by imposing a direct still-head duty on every gallon issued from the Distillery. Under Distillery arrangements it has also been possible to regulate and supervise thoroughly the manufacture of its liquor and its disposal subsequent to leaving the Distillery by means of a system of transport passes, establishment supervision, improved distribution and vend arrangements.

Various Systems.

The Out-Still System may be taken to include all systems prior in order of development to the imposition of Still-head duty. Briefly stated the stages of development have been — First: farms of large tracts; Second: farms of smaller areas; Third: farms of the combined right to manufacture and sell at particular places without any exclusive privilege over a definite area; Fourth: farms of similar right subject to control of means and times for distilling and the like. The Provincial Governments have had to deal with the subject in different ways suited to local conditions, and so the order of development from the lower forms of systems to the higher has not been always everywhere identical in details. Yet in its essence and main features the Excise Administration in most provinces of British India has progressed on uniform lines the key note lying in attempts, where it has not been possible to work with the fixed duty system in its simplest forms, to combine the farming and fixed duty systems with the object of securing that every gallon of spirit should bear a certain amount of taxation. The Out-Still System has in its turn been superseded by either the Free-supply system or the District Monopoly system. The Free-supply system is one of free competition among the licensed distillers in respect of manufacture. The right of vend is separately disposed of. The District monopoly system on the other hand is one in which the combined monopoly of manufacture and sale in a district is leased to a farmer subject to a certain amount of minimum still-head duty revenue in the monopoly area being guaranteed to the State during the term of the lease.

The recommendations of the Indian Excise Committee of 1905-06 resulted in numerous reforms in British India, one of them being that the various systems have been or are gradually being superseded by the Contract Distillery System under which the manufacture of spirit for supply to a district is disposed of by tender, the rate of still-head duty and the supply price to be charged are fixed in the contract and the right of vend is separately disposed of. This is the system that now prevails over the greater portion of British India. The other significant reforms have been the revision of the Provincial Excise Laws and regulations, and the conditions of manufacture, vend, storage and transport, an improvement in the quality of the spirit, an improved system of disposal of vend licenses, reductions and re-distributions of shops under the guidance and control of local Advisory Committees and gradual enhancement of taxation with a view to checking consumption.

Since the issue of the report of the Excise Committee 1905-06, no less than 213,000 square miles of territory were transferred from the out-still to the distilling system. In 1905-06 39 per cent of the total excise area and 28 per cent of the population of that area were served by out-stills, the proportions in 1912-13 were only 15 and 8 per cent. respectively.

Excise has now been made over entirely to the Provincial Governments, and the duties vary from province to province. The governing principle in fixing these rates is the highest duty compatible with the prevention of illicit distillation.

Sap of the date, palmyra, and cocoanut palms called toddy, is used as a drink either fresh or after fermentation. In Madras and Bombay the revenue is obtained from a fixed fee on every tree from which it is intended to draw the liquor and from shop licenses fees. In Bengal and Burma the sale of shop licenses is the sole form of taxation. Country brands of rum, and so-called brandies and whiskies, are distilled from grape juice, etc. The manufacture is carried out in private distilleries in various parts of India. A number of breweries has been established, mostly in the hills, for the manufacture of a light beer for European and Eurasian consumption. The uniform fee of 4 annas 6 pies per gallon is levied all over India at the time of issue.

Foreign liquor is subject to an import duty at the tariff rates, which are set out in the Customs Tariff (*q. v.*). It can only be sold under a license.

Since the war Brandy and Whisky are manufactured in considerable quantities at Baroda.

The base used is the Mhowra flower. It is drunk in big towns as a substitute for German spirit, and is excised at tariff rates.

DRUGS.—The narcotic products of the hemp plant consumed in India fall under three main categories, namely, ganja or the dry flowering tops of the cultivated female hemp plant charas, or the resinous matter which forms an active drug when collected separately; and bhang, or the dried leaves of the hemp plant whether male or female cultivated or uncultivated. The main features of the existing system are restricted cultivation under supervision, storage in Bonded Warehouses, payment of a quantitative duty before issue, retail sale under licenses and restriction on private possession. Licenses to retail all forms of hemp drugs are usually sold by auction.

OPIUM.—Opium is consumed in all provinces in India. The drug is commonly taken in the form of pills; but in some places, chiefly on social and ceremonial occasions, it is drunk dissolved in water Opium smoking also prevails in the City of Bombay and other large towns. The general practice is to sell opium from the Government Treasury, or a Central Warehouse, to licensed vendors. The right of retail to the public is sold by annual auction to one or several sanctioned shops.

The estimated opium revenue in 1921-22 is Rs. 3,72,85,000.

SALT.

The salt revenue was inherited by the British Government from Native rule, together with a miscellaneous transit dues. These transit dues were abolished and the salt duty consolidated and raised. There are four great sources of supply: rock salt from the Salt range and Kohat Mines in the Punjab; brine salt from the Sambha Lake in Rajputana, salt brine condensed on the borders of the lesser Rann of Cutch; and sea salt factories in Bombay, Madras and at the mouth of the Indus.

The Salt Range mines contains an inexhaustible supply. They are worked in chambers excavated in salt strata, some of which are 250 feet long, 45 feet wide and 200 feet high The Rajputana supply chiefly comes from the Sambhar Lake where brine is extracted and evaporated by solar heat. In the Rann of Cutch the brine is also evaporated by solar heat and the product is known as Baragara salt. In Bombay and Madras sea water is let into shallow pans on the sea-coast and evaporated by solar heat and the product sold throughout India. In Bengal the damp climate together with the large volume of fresh water from the Ganges and the Brahmaputra into the Bay of Bengal render the manufacture of sea salt difficult and the bulk of the supply, both for Bengal and Burma, is imported from Liverpool, Germany, Aden, Bombay and Madras.

Broadly, one-half of the indigenous salt is manufactured by Government Agency, and the remainder under license and excise systems. In the Punjab and Rajputana the salt manufactories are under the control of the Northern India Salt Department, a branch of the Commerce and Industry Department. In Madras and Bombay the manufactories are under the supervision of Local Governments. Special treaties with Native States permit of the free movement of salt throughout India, except from the Portuguese territories of Goa and Damaun, on the frontiers of which patrol lines are established to prevent the smuggling of salt into British India.

From 1888-1903 the duty on salt was Rs. 2-8 per maund of 82 lbs. In 1903, it was reduced to Rs. 2; in 1905 to Rs. 1-8-0; in 1907 to Re 1 and in 1916 it was raised to Rs. 1-4-0. The successive reductions in duty have led to a largely increased consumption, the figures rising by 25 per cent. between 1903-1908 The estimated salt revenue in 1921-22 is Rs. 7,00,66,000

CUSTOMS.

The import duties have varied from time to time according to the financial condition of the country. Before the Mutiny they were five per cent.; in the days of financial stringency which followed they were raised to 10 and in some cases 20 per cent. In 1875 they were reduced to five per cent., but the opinions of Free Traders, and the agitation of Lancashire manufacturers who felt the competition of the Indian Mills, induced a movement which led to the abolition of all customs dues in 1882. The continued fall in exchange compelled the Government of India to look for fresh sources of revenue and in 1894 five per cent. duties were reimposed, yarns and cotton fabrics being excluded, Continued financial stringency brought piece-goods within the scope of the tariff, and after various expedients the demands of Lancashire were satisfied by a general duty of 3½ per cent. on all woven goods—an import duty on goods by sea, an excise duty on goods produced in the country. The products of the hand-looms are excluded. These excise duties are intensely unpopular in India, for reasons set out in the special article dealing with the subject. In 1910-11, in order to meet the deficit threatened by the loss of the revenue on opium exported to China, the silver duty was raised from 5 per cent. to 4d. an ounce, and higher duties levied on petroleum, tobacco, wines, spirits, and beer. These were estimated to produce £1 million annually.

The Customs Schedule was completely recast in the Budget of 1916-17 in order to provide additional revenue to meet the financial disturbance set up by the war. The general import tariff, which had been at the rate of 5 per cent. *ad valorem* since 1894 was raised to 7½ per cent. *ad valorem*, except in the case of sugar; as India is the largest producer of sugar in the world the import duty on this staple was fixed at 10 per cent. There was also a material curtailment of the free list. The principal article of trade which was not touched was cotton manufactures. For the past twenty years the position has been that cotton twists and yarns of all kinds are free of duty while a duty at the rate of 3½ per cent. is imposed on woven goods of all kinds whether imported or manufactured in Indian mills. The Budget left the position as it stood. The Government of India would have been glad to see the tariff raised to 5 per cent. without any corresponding alteration of the excise, but were over-ruled by the Cabinet on the ground that this controversial matter must come up for discussion after the war. Finally the Budget imposed export duties on tea and jute. In the case of tea the duty was fixed at Re. 1-8-0 per 100 lbs; in the case of jute the export duty on raw jute was fixed at Rs. 2-4-0 per bale of 400 lbs., approximately equivalent to an *ad valorem* duty of 5 per cent.; manufactured jute was charged at the rate of Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians.

The Customs Tariff was further materially modified in the Budget for 1917-18. In the previous year an export duty on jute was imposed at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute and Rs. 10 per ton on sackings, and Rs. 16 per ton on Hessians; these rates were doubled, with a view to obtaining an additional revenue of £500,000. The import duty on cotton goods was raised from 3½ per cent. to 7½ per cent. without any alteration in the Excise, which remained at 3½ per cent. This change was expected to produce an additional revenue of £1,000,000. The question of the Excise was left untouched, for the reason, amongst others, that the Government could not possibly forego the revenue of £320,000, which it was expected to produce. With these changes in operation the revenue from Customs in 1920-21 was Rs. 32,37,29,000.

The Customs Tariff was further raised in the Budget of 1921-22 in order to provide for the big deficit which had then to be faced. The general *ad valorem* duty was raised from 7½ to 11 per cent.; a special duty was levied on matches of 12 annas per gross boxes in place of the existing *ad valorem* duty of 7½ per cent. the duties on imported liquors was raised to 3 annas per degree of proof per gallon; the *ad valorem* duty of 7½ per cent was raised to 20 per cent. in the case of certain articles of luxury; the import duty on foreign sugar was increased from 10 to 15 per cent. and the duty on manufactured tobacco was raised by 50 per cent. The yield of the Customs Duties in 1921-22 is estimated at Rs. 18,58,07,000.

The Customs Department is administered by an Imperial Customs Service responsible to the Imperial Government in the Department of Commerce and Industry, but acting through the Local Governments. The senior Collectors are Covenanted Civilians specially chosen for this duty; the subordinates are recruited in India and in England **(Customs Tariff q. v.)**

Income Tax.

The income tax was first imposed in India in 1860, in order to meet the financial dislocation caused by the Mutiny. It was levied at the rate of four per cent. or a little more than 9½ d. in the pound on all incomes of five hundred rupees and upwards. Many changes have from time to time been made in the system, and the present schedule was consolidated in the Act of 1886. This imposed a tax on all incomes derived from sources other than agriculture which were exempted. On incomes of 2,000 rupees and upwards it fell at the rate of five pies in the rupee, or about 6¼d. in the pound; on incomes between 500 and 2,000 rupees at the rate of four pies in the rupee or about 5d. in the pound. In March 1903 the minimum taxable income was raised from 500 to 1,000 rupees. The income-tax schedule was completely revised, raised, and graduated in the Budget of 1916-17 in the general scale of increased taxation imposed to meet the deficit arising out of war conditions.

Since then the process has been almost continuous and in every financial difficulty the authorities turn to the Income Tax as a means of raising fresh revenue. The last revision was in the Budget of 1921-22, when the scale was fixed as follows:—

		Rate.
I.	When the taxable income is less than Rs. 2,000	*Nil.*
II.	When the taxable income is Rs. 2,000 or upwards and —	
	(*i*) the total income is less than Rs. 5,000	Five pies in the rupee.
	(*ii*) the total income is Rs. 5,000 or upwards, but is less than Rs. 10,000	Six pies in the rupee.
	(*iii*) the total income is Rs. 10,000 or upwards, but is less than Rs. 20,000	Nine pies in the rupee.
	(*iv*) the total income is Rs. 20,000 or upwards, but is less than Rs. 30,000	One anna in the rupee.
	(*v*) the total income is Rs. 30,000 or upwards, but is less than Rs. 40,000	One anna and two pies in the rupee.
	(*vi*) the total income is Rs. 40,000 or upwards	One anna and four pies in the rupee.

RATES OF REFUND.

	Amount.	Refund.
1.	Less than Rs. 2,000	One anna and four pies in the rupee.
2.	Rs. 2,000 or upwards, but less than Rs. 5,000	Eleven pies in the rupee.
3.	Rs. 5,000 or upwards, but less than Rs. 10,000	Ten pies in the rupee.
4.	Rs. 10,000 or upwards, but less than Rs 20,000	Seven pies in the rupee.
5.	Rs. 20,000 or upwards, but less than Rs 30,000	Four pies in the rupee.
6.	Rs. 30,000 or upwards, but less than Rs 40,000	Two pies in the rupee

SUPER-TAX.

(1) In respect of the first lakh of rupees of taxable income –	
(*a*) in the case of a Hindu undivided family –	
(*i*) in respect of the first seventy-five thousand rupees of taxable income	*Nil*
(*ii*) in respect of the next twenty-five thousand rupees of taxable income	One anna in the rupee
(*b*) In all other cases –	
(*i*) in respect of the first fifty thousand rupees of taxable income	*Nil.*
(*ii*) in respect of the next twenty-five thousand rupees of taxable income	One anna in the rupee.
(2) In respect of the first fifty thousand rupees of taxable income over one lakh of rupees	One and a half annas in the rupee
(3) In respect of the next fifty thousand rupees of taxable income	Two annas in the rupee.
(4) In respect of the next fifty thousand rupees of taxable income	Two and a half annas in the rupee.
(5) In respect of the next fifty thousand rupees of taxable income	Three annas in the rupee.
(6) In respect of the next fifty thousand rupees of taxable income	Three and a half annas in the rupee
(7) In respect of all taxable income over three and a half lakhs of rupees	Four annas in the rupee.

The total yield of the Taxes on Income in the current year are estimated at Rs 18,58,07,000.

THE DEBT.

On 31st March 1920, the national debt of India was 566 crores. This figure represents less than Rs. 24 per head of India's population; when compared with the public revenues, which in 1919-20 amounted to about 203 crores, constitutes a national indebtedness which, in comparison with the national resources, is very much smaller than that of most other nations. The reason why India is in this favourable position is mainly the care with which, in the long years of peace preceding the great war, her outlay was restricted to her available means whereby the accumulation of wasteful and unproductive debt was avoided. At the commencement of the war India found herself in a position when almost the whole of her debt represented productive outlay on railways and irrigation, normally yielding a return considerably in excess of the interest which she had to pay on the amount borrowed, including the interest on the small amount of debt which could be described as unproductive.

Productive Debt.—The following table shows the amount of the national debt of India both productive and non-productive, from time to time :—

(IN CRORES OF RUPEES.)

	Ordinary Debt.	Productive Debt.			Total of debt.
		Railways.	Irrigation.	Total.	
On 31st March—					
1893	97·0	136·5	28·9	165·4	262·9
1898	105·5	159·0	32 5	191·5	296·5
1903	88·7	192·1	37·2	229·3	318·0
1908	56·1	266·6	44·8	311·4	367·5
1913	37·5	317·7	56·1	374·1	411·6
1914	19·2	333·0	59·1	392·1	411·3
1915	3·3	349·8	61·6	411·4	414·7
1916	3·0	351·6	63·6	415·2	418·2
1917	10·5	353·6	61·9	418·5	429·0
1918	132·5	358·8	65·9	424 7	557·2
1919	129·9	365·5	66·7	432·2	562·1
1920	117·8	381·0	67·5	448·5	566·3

On the 31st March 1914, out of a total debt of 411 crores, only 19 crores represented ordinary or unproductive debt. The annual interest on the latter was only a crore, and on the productive debt about 13 crores, so that India's total interest charges then amounted to about 14 crores. On the other hand, railways and irrigation works, which had been financed from the productive debt, yielded in that year a return of nearly 23 crores, which left a margin of 9 crores of clear profit to the country, after meeting the interest charges on the entire debt. Even after the contribution of £100 millions to the cost of the war which India made in 1917, and which added over 30 per cent. to the national debt, the revenue from railways and irrigation amounted in the year 1918-19 to 33 crores, so that the revenue from productive expenditure amounted to 133 per cent. of the total interest charges. Had it not been for India's contribution of 150 crores to the expenses of the war the ordinary debt would have been completely wiped out in 1917, and the amount of the ordinary debt outstanding on 31st March 1919, namely, 129 9 crores was thus actually less than the amount of that contribution.

Financial Strength.—These are not the only facts which show the strength of India's financial position. The interest on her public debt is not only secured by the revenue from railways and irrigation works which were directly financed by borrowing, but is a charge on the public revenues as a whole. The following table shows the total revenue and expenditure of India (including the revenue and expenditure of the provinces) during the past six years.

	IN CRORES OF RUPEES.	
	Revenue	Expenditure
1912-13	130	119
1913-14	128	125
1914-15	122	128
1915-16	127	128
1916-17	147	132
1917-18	169	154
1918-19	185	190
1919-20	203	218

Form of Debt.—The existing rupee loans are of two kinds:—

(1) Those which Government has undertaken not to repay before a certain fixed date, but which are repayable at the option of Government at any time after that date, after giving notice.

(2) Those which Government has undertaken to repay either (*a*) on a certain fixed date, or (*b*) not earlier than a certain fixed and not later than another fixed date.

The following are the rupee loans now in existence:—

(*a*) NON-TERMINABLE LOANS.

1	2	3	4
Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment. (Unless otherwise stated, repayment will be at par.)	Amount outstanding on Sept. 30th, 1920.
			Rs.
1 3½ per cent. loan of 1842-43..	1st February and 1st August.	Repayable at the option of Government after three months' notice.	20,84,34,000
2. 3½ per cent. loan of 1854-55.	30th June and 31st December.		29,35,58,000
3. 3½ per cent. loan of 1865 ..	1st May and 1st November.		34,00,94,000
4. 3½ per cent. loan of 1879 ..	16th January and 16th July.		3,61,03,000
5. 3 per cent. loan of 1896-97.	30th June and 31st December.		6,57,25,000
6. 3½ per cent. loan of 1900-01..	30th June and 31st December	Repayable not before 30th December 1920, and thereafter at the option of Government after three months' notice.	31,29,78,000
		TOTAL ..	1,25,68,92,000

(*b*) TERMINABLE LOANS.

	Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment.	Amount outstanding on Sept. 30th 1920.
				Rs.
1	4 per cent Terminable Loan of 1915-16.	31st May and 30th November.	Repayable not before 30th November 1920 and not later than 30th November 1923.	4,99,86,000
2.	4 per cent. Conversion Loan of 1916-17.	1st April and 1st October.	Repayable not before 1st October 1931 and not later than 1st October 1936.	9,90,01,000
Indian War Loan 1917.	3. 5 per cent. War Loan, 1929-47.	15th February and 15th August.	Repayable not before 15th August 1929 and not later than 15th August 1947.	24,62,10,000
	4. 5½ per cent. War Bonds, 1920 *	15th February and 15th August.	Repayable on the 15th August 1920.	2,79,13,000
	5. 5½ per cent. War Bonds, 1922.*	15th February and 15th August.	Repayable on the 15th August 1922.	11,28,76,000
Indian War Loan 1918.	6. 5½ per cent War Bonds, 1921.*†	15th March and 15th September	Repayable on the 15th September 1921.	15,73,55,000
	7. 5½ per cent War Bonds, 1923*†	15th March and 15th September	Repayable on the 15th September 1923.	2,14,70,000
	8. 5½ per cent. War Bonds, 1925.*†	15th March and 15th September	Repayable (at Rs. 103 per cent) on the 15th September 1925.	4,17,35,000
	9 5½ per cent War Bonds, 1928.*†	15th March and 15th September	Repayable (at Rs. 105 per cent) on the 15th September 1928.	25,06,08,000
1919	10. 5 per cent. Loan, 1945-55.*	15th April and 15th October.	Repaybale at par not earlier than 15th October 1945 and not later than 15th October 1955.	21,22,01,000
			TOTAL ..	1,21,93,75,000

*N.B.**—The interest on the loans marked* is exempt from income-tax, but not from super-tax.

† These Bonds will be accepted at par during their currency, as the equivalent of cash for the purpose of subscription to any future long term loan, whatever its rate of interest may be.

There are also still in existence a few special loans, such as certain railway loans taken up by three Indian Chiefs, and a special 4 per cent. loan taken up by the Maharaja of Gwalior in 1887.

Sterling Debt.—Besides the rupee loans, the national debt of India consists of some £171 millions of sterling debt. In former years India was obliged to depend to a large extent on her borrowings in London to finance her expenditure on railways and irrigation, and the present sterling debt represents such of those loans as are still outstanding:—

(1) India 3½ per cent. stock, of which the amount outstanding on 30th Sept. 1920 was about £ 90 millions;

(2) India 3 per cent. stock, of which the amount outstanding on that date was about £65 millions;

(3) India 2½ per cent. stock, of which the amount outstanding on that date was about £ 11½ millions.

The remainder of the sterling debt is made up of certain railway debenture stocks, of which the amounts in each case are comparatively small, together with so much of India's contribution of £100 millions as has not been liquidated from the proceeds of the War Loans of 1917 and 1918; the amount of sterling debt outstanding on this account on the 30th September 1919 was about £22 millions representing the liability accepted by India for a corresponding amount of British War Loan.

Nature of Securities.—The three main forms in which the rupee debt is held are—(*i*) *Stock* or, as it is sometimes called *Book Debt*, (*ii*) *Bearer Bonds*; (*iii*) *Promissory Notes*.

(*i*) When debt is held in the form of *Stock*, the owner is given a certificate to the effect that he has been registered in the books of the Public Debt Office as the proprietor of a certain amount of Government stock. This certificate is known as a *Stock Certificate*, and it is by that name that this form of debt is generally known.

(*ii*) A *Bearer Bond* certifies that the bearer is entitled to a certain sum of rupees in respect of the loan to which the bond relates.

(*iii*) A *Promissory Note* contains a promise by the Governor General in Council, on behalf of the Secretary of State for India, to pay a certain person a specified sum either on a specified date or after certain notice (according to the terms of the particular loan to which the promissory note relates), and to pay interest thereon at a certain rate half-yearly on certain specified dates.

Each of the above three forms of security is convertible by the holder into either of the other two.

Other Government Securities.—*Treasury Bills and Post Office Cash Certificates* are also forms of Government securities.

Treasury Bills, when issued, are in respect of temporary borrowing by the Government of India, and usually have a currency of from three to twelve months. They are sold at a discount, and are paid at maturity at their full face value, the difference representing the yield on the investment. The lowest denomination issued is for Rs. 5,000. Their sale and payment at maturity are managed by the Presidency Banks.

Cash Certificates.—*Post Office Cash Certificates* are specially intended to facilitate the investment of small amounts and to encourage saving among people of small incomes. They have a currency of five years, at the expiry of which they will be repaid. The profit to the investor consists in the fact that they are sold for an amount less than the face value, thus, cash certificates of denominations of Rs. 10, Rs. 20, Rs. 50, Rs. 100, and Rs. 500 can at present be obtained on payment of Rs. 7-12, Rs. 15-8, Rs. 38-12, Rs. 77-8 and Rs. 387-8 respectively. The maximum amount for which certificates may be held by any one person is Rs. 10,000 face value. The special attraction of these Cash Certificates is that the investor's money is not necessarily locked up for the full term of five years. He can, if he wishes, obtain payment at any time during the currency of the certificate, and he will then receive an amount which, according to the time he has held the certificate, gradually increases at compound interest from the original purchase price up to the full face value of the certificate at the end of five years. In the case of the Cash Certificates issued in connection with the Indian War Loans the yield to the investor ranges from 4 per cent. a year, if he presents it for payment after having held it for one year only, to 5½ per cent. a year if he holds it for the full five years. The investor's profit is not subject to income-tax. These certificates are for sale all the year round and can be obtained at any Post Office which does savings bank business, and payment of the amount due can also be obtained at any such office.

AMOUNT of the RUPEE and STERLING DEBT and of the INTEREST thereon, annual INCREASE or REDUCTION of the DEBT; and the PROPORTION of the RUPEE DEBT held in LONDON, from 1820-21 to 1919-20.

	Registered debt in India.	Registered debt in London.	Interest payable		Amount borrowed and paid off each year (Borrowed +; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
					In India.	In England.	
	Rs.	£	Rs.	£	Rs.	£	Rs.
1820-21	27,24,77,630	5,762,888	1,63,15,400	253,247	—26,73,970	—109,268	
1830-31	33,12,96,680	3,750,479	1,74,19,770	93,377	+75,52,710	—45,413	
1840-41	29,47,65,040	1,756,992	1,35,37,050	59,856	+1,15,89,400	—400	
1850-51	45,42,87,550	3,920,592	2,12,39,750	136,482	+1,00,72,750	—100	
1860-61	63,44,58,100	28,496,917	2,88,34,460	1,249,832	—10,05,920	+4,138,000	
1861-62	63,42,08,450	32,116,217	2,88,32,440	1,457,874	—2,49,650	+3,619,300	
1862-63	63,82,11,060	31,860,017	2,89,95,320	1,430,765	+40,02,610	—256,200	(a)
1863-64	63,40,38,320	26,332,517	2,88,06,180	1,209,621	—41,72,740	—5,527,500	
1864-65	63,36,66,840	26,146,017	2,88,00,400	1,233,165	—3,71,480	—186,500	
1865-66							
1866-67	62 38,10,770	26,967,317	2,84,13,900	1,274,230	—98,56,070	+821,300	
1867-68	62,97,84,230	28,559,917	2,87,13,200	1,402,540	+59,73,460	+1,592,600	
1868-69	63,76,50,020	29,718,417	2,91,57,860	1,448,875	+78,65,790	+1,158,500	
1869-70	63,41,06,910	31,218,917	2,89,87,270	1,469,916	—35,43,110	+1,500,500	15,38,06,980
1870-71	65 59,24,220	35,217,617	2,98,17,500	1,629,868	+2,18,27,310	+3,998,700	16,24,51,720
1871-72	66,80,96,570	37,627,617	3,01,56,310	1,726,268	+1,21,62,350	+2,410,000	17,64,70,910
1872-73	67,96,89,420	39,012,617	2,98,08 300	1,781.618	+1.15,92,850	+1,385.000	13,56.38,630
1873-74	66,45,83,690	39,012,617	2,89,20.500	1,831,467	—1,51.05,730	....	13,04,77,110
	66,41,72,910	41,117,617	2,89,50,060	1,867,121	—4,10,789	+2.105,000	13,27,22,050
1874-75							
1875-76	69,84,99,590	48,597,033	3,03,35,320	2,165,364	+3,43,26,680	+7,479,416	14,05.71,800
1876-77	72,77,29.810	49,797.033	3,15,29,180	2,212,582	+2.92,30,220	+1,200,000	15,45.77,080
1877-78	71,92,31,260	55,397,033	3,10,98,710	2,486,271	—84,98,550	+5,600,000	14.21,01,660
1878-79	74,95;45,200	59,677.033	3,22,68,610	2,607,472	+3.03,13.940	+4,280,000	15,78,70,170
1879-80	78,83,89,260	59,029,117	3,25,77,260	2,581.555	+3,88,44,060	—647,916	17,14,82,760
1880-81	82,87,25,090	68,855,556	3,41,76,560	1,937,886	+4.03,35,830	+9,826,439	20.52,60,670
1881-82	85,05,97,460	71,429,133	3,55,92,700	2,846,478	+3,08.72,370	+2,573.577	20,26,31,450
1882-83	88,65,31,620	68,181,947	3,66,43,280	2,708,198	+2,69.34.169	—3,287,186	22.65,59,550
1883-84	90,68,87.660	68,585,694	3.74.11,490	2,725,748	+2.03.56,040	+443,747	22,58,11,320
	93.19,13,840	68,108.837	3,84,91,140	2.704,267	+2.50.26.180	—476,357	22,08,75.180

(a) No information.

AMOUNT of the RUPEE and STERLING DEBT—(*contd.*).

—	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion o the registered rupee debt held in London on 31st March
					In India.	In England.	
	Rs.	£	Rs	£	Rs.	£	Rs.
1886-87	92,65,36,360	84,228,177	3,82,02,570	3 165,411	—5,03,460	+10,421,556	19,14,95,570
1887-88	98,08,98,620	84,140,148	4,03,78,580	2,918,039	+5,43,62,260	—88,029	20,18,88 870
1888-89	1,00,87,97,420	95,033 610	4,13,73,120	3,230,474	+2,78,98,800	+10,893,462	21,71,40,680
1889-90	1,02,76,11,750	98,192,391	4,21,56,080	3,327 348	+1,88,14,330	+3 158,781	21 59,40,456
1890-91	1,02,74,65,550	104,408,208	4,17,51,110	3,524,376	—1,46 200	+6,215,817	26 73,12,950
1891-92	1,02,69,23,170	104,404,143	4,17,15,000	3,602,349	—5,42,380	+2 995,935	27,50,58,419
1892-93	1,02,93,75,520	106,683,767	4,12,77,760	3,570,682	+24,52,350	—720,376	25,93,38,610
1893-94	1,05,54,60,780	114,113,792	4,20,92,060	3,687,986	+2,60,85,260	+7,430,025	24,16,55,419
1894-95	1,04,37,37,400	116,005,826	3,61,09,140	4,825,323	—1,17,23,380	- 1,892,034	23,62,59,660
1895-96	1,03,78,89,280	115,903,732	3,64,00,740	3,607,832	—58,48,120	—102,094	25,35,07,520
1896-97	1,09,11,50,530	114,883,233	3,78,43,760	3,813,208	+5,37,61,250	—1,020,499	24,06,66,620
1897-98	1,11,69,56,340	123,274,680	3,87,11,060	3,940,776	+2,58,05,810	+8 391,447	21,50,87,030
1898-99	1,12,65,46,980	124,268,605	3,91,13,340	3,882,758	+95,90,640	+993 925	21,44,12,330
1899-1900	1,12,47,47,010	124,144,401	3,90,56,317	3,877,026	—17,99,970	—121,204	20,81,88,234
1900-01	1,15,33,19,058	133,435,377	4,00,58,600	4,158,351	+2,85,72,048	+9,290,978	22,18,12,135
1901-02	1,16,19,13,833	134,307,090	4,03,60,615	4,213,821	+85,94,775	+871,711	20,36,22,034
1902-03	1,17,55,40,660	133,796,261	4,08,37,864	4,213,537	+1,36,26,827	—510 829	18,63,35,034
1903-04	1,19,42,43,035	133,045,844	4,14,90,065	4,238,273	+1,87,02,375	—750 417	17,13,92,234
1904-05	1,22,29,78,235	132,887,191	4,24,92,526	4,282,744	+2,87,35 200	—158,653	16,81,55,234
1905-06	1,26,08,10,618	146,457,439	4,38,10,365	4,715,233	+3,78,32,383	+13,570,248	16,43,82,933
1906-07	1,30,45,50,655	147,518,634	4,53,38,937	4,743,108	+4,37,40,037	+1,061,195	16,49,16,833
1907-08	1,32,82,94,955	156,481.074	4,61,66,110	5,053,632	+2,37,44,300	+8,962,440	15,23,21,733
1908-09	1,34,56,60,505	160,973,369	4,68,19,197	5,210,695	+1,73,65 550	+4,492,295	14,43,66,433
1909-10	1,36,84,33,105	170,105,911	4,76,47,428	5,530,758	+2,27,72,600	+9,132,542	15,21,19,933
1910-11	1,38,09,72,155	177,998,335	4,81,24,302	5,668,417	+1,25,39,050	+7,892,424	12,78,49,733
1911-12	1,39,96,36,205	178,486,597	4,87,76,458	5,705,597	+1,86,64,050	+488,262	11,73,03,533
1912-13	1,42,83,64,790	179,179,193	4,97,78,481	5,749,887	+2,87,28,585	+692,596	11,20,29,433
1913-14	1,45,68,55,790	177,064,757	5,07,80,519	5,693,919	+2,84,91,000	—2,114,436	10,08,74,333
1914-15	1,50,52,65,200	176,190,358	5,25,30,534	5,682,898	+4,84,09,410	—874,399	9,72,99,850
1915-16	1,55,45,97,700	175,171,829	5,45,29,991	5,665,349	+4,93,32,500	—1,018,529	8,82,51,650
1916-17	1,62,86,03,073	174,144,724	5,74,23,729	5 647,451	+7,40,05,373	—1,027,105	8,30,41,600
1917-18	1,70,07,88,793	236,957,575	5,13,58,187	8,827 162	+7,21,85,720	+62,812,851	7,47,56,300
1918-19	1,99,06,53,494	202,528,570	8,00,13,565	7,139 089	+28,98,64,701	—34,429,005	8,17 23,775
1919-20	2,19,42,59,480	192,631,082	9,02,09,953	6,652,195	+20,36,05,986	—9,897,488	6,82,83,775

INDIAN DEBT IN ENGLAND.

RETURN of all LOANS raised in *England*, under the Provisions of any Acts of Parliament, chargeable on the REVENUES of *India*, outstanding at the Commencement of the Half-year ended on the 31st March 1921.

DESCRIPTION OF LOAN.	Total Amount of Interest payable thereon during the Half-year ended 31st March 1921.	DATE OF TERMINATION OF LOAN.	Amount of Debt paid off or discharged during the Half-year ended 31st March 1921	Amount of Debt outstanding on 31st March 1921.
LOANS BEARING INTEREST.	£		£	£
India 3½ per cent. Stock	1,564,746	Not redeemable until 5th January 1931, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	159,324	89,254,747
India 3 per cent. Stock	974,082	Not redeemable until 5th October 1948, but on or after that day upon one year's previous notice having been given by the Secretary of State for India in Council ..	220,721	64,828,468
India 2½ per cent. Stock	145,187	Not redeemable until 5th October 1926, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	.....	11,614,987
East Indian Railway Debenture Stock 4½ per cent.	32,302	.....	.....	1,435,650
Eastern Bengal Railway Debenture Stock 4 per cent.	6,973	.....	.....	348,666
South Indian Railway Debenture Stock 4½ per cent.	9,562	.....	.....	425,000
Great Indian Peninsula Railway Debenture Stock 4 per cent. ..	54,029	.....	.....	2,701,450
	2,786,881	Total Debt in England ..	380,045	170,608,968

INTEREST EXPENDITURE AND SINKING FUNDS.

	Accounts, 1919-20.	Revised, 1920-21.	Budget, 1921-22.
INTEREST ON DEBT OTHER THAN THAT CHARGED TO RAILWAYS AND IRRIGATION WORKS—	Rs.	Rs.	Rs.
Interest on total Debt—			
1. India	14,92,79,916	17,35,40,000	17,08,00,000
2. England	6,96,21,840	6,61,58,000	6,79,07,000
Total ..	21,89,01,756	23,96,98,000	23,87,07,000
Deduct—Amounts, charged to—			
(*a*) Railways:			
(*i*) India	7,63,56,062	9,92,54,000	11,16,72,000
(*ii*) England	3,67,30,270	3,77,47,000	3,86,66,000
Total Railways	11,30,86,332	13,70,01,000	15,03,38,000
(*b*) Irrigation:			
(*i*) India	8,83,915	9,09,000	9,85,000
(*ii*) England	50,000	51,000	....
Total Irrigation . ..	9,33,915	9,60,000	9,85,000
Total deduction . ..	11,40,20,247	13,79,61,000	15,13,23,000
Interest on Ordinary Debt	10,48,81,509	10,17,37,000	8,73,84,000
INTEREST ON OTHER OBLIGATIONS—			
On Savings Bank Balances..	1,40,92,437	1,94,78,000	1,95,44,000
Other Items	46,18,701	41,62,000	35,33,000
Total	1,87,11,138	2,36,40,000	2,30,77,000
SINKING FUNDS—			
(*i*) India	73,00,000	73,61,000	1,54,00,000
(*ii*) England	50,00,000	50,00,000	50,00,000
Total ..	1,23,00,000	1,23,61,000	2,04,00,000
GRAND TOTAL ..	13,58,92,647	13,77,38,000	13,08,61,000

INTEREST EXPENDITURE—*contd.*

	Accounts, 1919-20.	Revised, 1920-21.	Budget, 1921-22.
Debt outstanding on 31st March—	£	£	£
Sterling	192,631,082	192,631,082	197,631,082
Rupee Debt—	Rs.	Rs.	Rs.
Permanent Debt—			
New Loan	....	....	15,00,00,000
6 per cent. Bonds 1930	....	29,34,70,000	29,34,70,000
5½ per cent. War Bonds	29,39,44,665	29,15,07,665	29,15,07,665
5 per cent. Debt	45,96,52,000	45,05,39,000	43,06,39,000
4 per cent. „	17,36,92,100	17,24,87,000	17,12,87,000
3½ per cent. „	1,19,07,99,465	1,19,13,92,465	1,19,19,85,000
3 per cent. „	6,61,57,750	6,54,57,750	6,47,57,750
Other Debt	1,00,13,500	1,00,13,500	1,00,13,500
Temporary Debt—			
5½ per cent. War Bonds	57,43,74,473	29,53,07,473	12,42,78,473
Treasury Bills—			
Issued to public	42,89,00,000	42,70,00,000	42,70,00,000
Issued to Paper Currency Reserve ..	10,09,00,000	61,26,00,000	57,19,00,000
Savings Bank Balances	41,19,82,242	45,32,04,242	49,99,35,242
Post Office Cash Certificates	5,75,31,356	4,77,56,356	4,17,56,356

The charges for the service of India's contribution to the war will be applied as follows :—

	1919-1920 Revised.	Budget, 1920-1921.
In India—	£	£
Interest on first Indian war loan, 1917	1,551,000	1,551,000
Sinking fund for long term Indian war loan (1929-47) at 1½ per cent. on the amount of loan created by fresh issue and conversion	273,300	273,300
Interest on second Indian war loan, 1918	2,092,200	2,092,200
Total ..	3,916,500	3,916,500
In England—		
Interest on British 5 per cent. war loan (1929-47) taken over by India	1,394,500	1,065,900
Sinking fund in respect of British 5 per cent. war loan (1929-47) taken over by India	500,000	500,000
Total ..	5,811,000	5,482,400

THE INDIAN MINTS.

The strong demand for rupees which characterised recent years was arrested in the year 1920-21 and the record coinages of 1918-19 and 1919-20 were followed by a period of comparative slackness at the Mints. Only 3,11,30,039 rupees were coined during the year, viz., 1,44 00,000 at the Calcutta Mint and 1,97,30,039 at the Bombay Mint, against 36,62,06,854 rupees struck at the two Mints in 1919-20. There was no coinage of fractional silver.

Uncurrent coins of the nominal value of Rs. 79,61,791 were received at the two Mints for re-coinage. Apart from these, the coinage was from purchased silver, the bulk of which consisted of bar silver and United States dollar bars.

Subsidiary coinage. In addition the following silver coinage was executed at the Bombay Mint on behalf of the Ceylon and Straits Governments:—

Denomination of coin	Tale.	Outturn value in standard tolas.	Government on whose behalf the coinage was executed.
	Rs.	Rs.	
Straits Dollars	10,000 121	78,45,871	Straits Government.
,, 50 Cents	6,479,464	25,55,026	
Ceylon 50 ,, ...	800,010	2,40,141	Ceylon Government.
,, 25 ,, ...	1,600,011	2,10,139	
,, 10 ,, ...	3,059,181	1,84,117	

Nickel and Bronze coinage.—The nickel and bronze coinage for the Government of India was comparatively light, but the Mints were also engaged in carrying out a certain amount of nickel and bronze coinage on behalf of Foreign Governments. Rs. 5,00,000 worth each of 8-anna and 4-anna nickels were coined for supply to the Mauritius Government. Apart from these, there was no coinage of 8-anna nickels and only 12,459,259 pieces of 4-anna coin valued at Rs. 31,14,815 were struck at the two Mints as compared with 26,304,006 pieces of 4-anna nickels coined during the previous year.

As in the previous year the coinage of 2-anna nickels was confined to the Calcutta Mint and of 1-anna nickels to the Bombay Mint and their nominal value amounted to Rs. 8,31,000 and Rs. 5,79,000 respectively as against Rs. 85,84,000 and Rs 76,74,6.8 in 1919-20. Besides the above 6,000,000 nickel five cent pieces for the Ceylon Government and 20,000,000 5 cent pieces for the Straits Government were coined at the two Mints.

The bronze coinage was as usual carried out entirely at the Calcutta Mint and consisted of pice, half pice and pie pieces of the aggregate value of Rs 15,29,800 as compared with Rs. 28,51,600 in 1919-20. The Calcutta Mint also coined 40,570,000 bronze 1 cent pieces for the Straits Government and 2,000,000 copper 1 cent pieces for the Ceylon Government.

HISTORY OF THE COINAGE.

The Indian mints were closed to the unrestricted coinage of silver for the public from the 26th June 1893, and Act VIII of 1893, passed on that date, repealed Sections 19 to 26 of the Indian Coinage Act of 1870, which provided for the coinage at the mints for the public of gold and silver coins of the Government of India. After 1893 no Government rupees were coined until 1897, when, under arrangements made with the Native States of Bhopal and Kashmir, the currency of those States was replaced by Government rupees. The re-coinage of these rupees proceeded through the two years 1897 and 1898. In 1899 there was no coinage of rupees; but in the following year it seemed that coinage was necessary, and it was begun in February 1900, the Government purchasing the silver required, and paying for it mainly with the gold accumulated in the Paper Currency Reserve. In that and the following month a crore of rupees was coined and over 17 crores of rupees in the year ending the 31st March 1910 including the rupees issued in connection with the conversion of the currencies of Native States. From the profit accruing to Government on the coinage it was decided to constitute a separate fund called the Gold Reserve Fund as the most effective guarantee against temporary fluctuations of exchange. The whole profit was invested in sterling securities, the interest from which was added to the fund. In 1906 exchange had been practically stable for eight years, and it was decided that of the coinage profits devoted to this fund, six crores should be kept in rupees in India, instead of being invested in gold securities. The Gold Reserve Fund was then named the Gold Standard Reserve. It was ordered in 1907 that only

one-half of the coinage profits should be paid into the reserve, the remainder being used for capital expenditure on railways. The Gold Standard Reserve was called into action before the year 1907-08 was out. Exchange turned against India, and in March 1908, the Government of India offered bills on the Secretary of State up to half a million sterling, while the Secretary of State sold £1,000,000 Consols in order to meet such demands. During April to August, further sterling bills were sold for a total amount of £8,058,000. On a representation by the Government of India, the Secretary of State agreed to defer the application of coinage profits to railway construction until the sterling assets of the Gold Standard Reserve amounted to £25,000,000. On the outbreak of the war in August 1914 the Reserve was drawn upon to meet the demands for sterling remittances, and Government offer to sell £1,000,000 of Bills weekly

Gold.

Since 1870 there had been no coinage of double mohurs in India and the last coinage of single mohur before 1918 in which year coinage was resumed, was in the year 1891-92

A Royal proclamation was issued in 1918 establishing a branch of the **Royal Mint at Bombay** It stated Subject to the provision of this proclamation the Bombay Branch Mint shall for the purpose of the coinage of gold coin, be deemed to be part of the Mint, and accordingly, (a) the Deputy Master of the Bombay Branch Mint shall comply with all directions he may receive from the Master of the Mint whether as regards the expenditure to be incurred or the returns to be made or the transmission of specimen coins to England or otherwise and (b) the said specimen coins shall be subject to the trial of the pyx under section 12 of the Coinage Act, 1870, so that they shall be examined separately from the coins coined in England or at any other branch of the Mint and (c) the Deputy Master of the Bombay Branch Mint and other officers and persons employed for the purpose of carrying on the business of the Branch Mint may be appointed, promoted, suspended and removed and their duties assigned and salaries awarded and in accordance with the provisions of section 15 of the Coinage Act, 1870. Pending the completion of the arrangements at the Branch Royal Mint, power was taken by legislation to coin in India gold mohurs of the same weight and fineness as the sovereign Altogether 2,109,703 pieces of these new coins of the nominal value of Rs 3,16,45,545, were struck at the Bombay Mint The actual coinage of sovereigns was begun in August, 1918, and 1,295,372 sovereigns were coined during the year. This branch of the Royal Mint was closed in April, 1919, owing to difficulties in supplying the necessary staff.

Act XXII of 1899, passed on the 15th September 1899, provided that gold coin (sovereign and half-sovereigns) shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign.

With the receipt of large consignments of gold, the Bombay Mint made special arrangements for the **refining of gold** by the chlorine process and at the end of the year 1919-20 the Refinery Department was capable of refining a daily amount of 6,000 ounces of raw gold. The Refinery turned out 16,62,466 fine tolas of refined gold in 1920-21.

Silver.

The weight and fineness of the silver coins are :—

	Fine Silver grains	Alloy grains	Total grains.
Rupee . .	165	15	180
Half-rupee	82½	7½	90
Quarter-rupee or 4-anna piece	41¼	3¾	45
Eighth of a rupee or 2-anna piece	20⅝	1⅞	22½

One rupee	165 grains of fine silver
One shilling	80.1 grains of fine silver
One rupee	shillings 2 04 39

Copper and Bronze.

Copper coinage was introduced into the Bengal Presidency by Act XVII of 1835 and into the Madras and Bombay Presidencies by Act XXII of 1844

The weight of the copper coins struck under Act XXIII of 1870 remained the same as it was in 1835 It was as follows :—

	Grains troy.
Double pice or half-anna	200
Pice or quarter-anna . .	100
Half-pice or one-eighth of an anna . .	50
Pie being one-third of a pice or one-twelfth of an anna	33⅓

The weight and dimensions of bronze coins are as follows :—

	Standard weight in grains troy.	Diameter in millimetres.
Pice	75	25 4
Half-pice . . .	37½	21 15
Pie	25	17·45

Nickel.

The Act of 1906 also provides for the coinage of a nickel coin. It was directed that the nickel one-anna piece should thenceforth be coined as the Mint and issue. The notification also prescribed the design of the coin, which has a waved edge with twelve scollops the greatest diameter of the coin being 21 millimetres and its least diameter 19 8 millimetres. The desirability of issuing a half anna nickel coin was considered by the Government of India in 1909 but after consultation with Local Governments it was decided not to take action in this direction until the people had become thoroughly familiar with the present one-anna coin. The two-anna nickel coin was introduced in 1917-18 ; and the four-anna and eight anna nickel coins in 1919.

The Currency System.

The working of the Indian currency system which has commanded a large amount of public attention since 1893, was forced to the front in 1920, as the result of measures taken to stabilise the exchange value of the rupee after the fluctuations caused by the war. These assumed so much importance, and they continue to bulk so largely in all Indian economic questions, that we propose to give here a short summary of the Indian currency system in non-technical language.

I. THE SILVER STANDARD.

Prior to 1893 the Indian currency system was a mono-metallic system, with silver as the standard of value and a circulation of silver rupees and notes based thereon. But with the opening of new and very productive silver mines in the United States of America the supply of silver exceeded the demand and it steadily receded in value. The result was that the gold value of the rupee, which was nominally two shillings, fell continuously until it reached the neighbourhood of a shilling. These disturbances were prejudicial to trade, but they were still more prejudicial to the finances of the Government. The Government of India has to meet every year in London a substantial sum in the form of payment of interest on the debt, the salaries of officials on leave, the pensions of retired officials, as well as large payment for stores required for State enterprises. As the rupee fell in its gold value the number of rupees required to satisfy these payments rose. The total reached a pitch which seriously alarmed the Government, which felt that it might be called upon to raise a sum in rupees which would necessitate a considerable increase in taxation, which should be avoided if possible. It was therefore decided to take measures to raise and fix the gold value of the rupee for the purposes of exchange.

Closing the Mints.—The whole question was examined by a strong committee under the presidency of Lord Herschell, whose report is commonly called the Herschell Report. It was decided in 1893 to close the mints to the unrestricted coinage of silver. This step led, as was intended, to a gradual divergence between the exchange value of the rupee and the gold value of its silver content. Government ceased to add rupees to the circulation. Rupees remained unlimited legal tender and formed the standard of value for all internal transactions. Since Government refused, and no-one else had the power to coin rupees, as soon as circumstances led to an increased demand for rupees, the exchange value of the rupee began to rise. By 1898 it had approached the figure of one shilling and fourpence. Meantime, in response to the undertaking of Government to give notes or rupees for gold at the rate of fifteen rupees to the pound sterling, gold began to accumulate in the Paper Currency Reserve. These purposes having been attained, a second committee was appointed under the chairmanship of Sir Henry Fowler to consider what further steps should be adopted in the light of these conditions. The report of the Fowler Committee as it was called marked the second stage in Ind an currency policy.

II THE NEW STANDARD.

The Fowler Committee rejected the proposal to re-open the Mints to the free coinage of silver. They proposed that the exchange value of the rupee should be fixed at one shilling and fourpence, or fifteen rupees to the sovereign. They further suggested that the British sovereign should be made a legal tender and a current coin in India: that the Indian mints should be thrown open to the unrestricted coinage of gold; so that the rupee and the sovereign should freely circulate side by side in India. The goal which the Committee had in view was a gold standard supported by a gold currency. Now under the condition which compelled the Government of India to give either rupees or rupee notes for gold tendered in India, at the rate of fifteen rupees to the sovereign, it was impossible for the rate of exchange to rise above one shilling and fourpence, save by the fraction which covered the cost of shipping gold to India. But if the balance of trade turned against India, it was still possible for the rate of exchange to fall. To meet this the Fowler Committee recommended that the profits on coining rupees should not be absorbed in the general revenues, but should be set aside in a special reserve, to be called the Gold Standard Reserve. Inasmuch as the cost of coining rupees was approximately elevenpence halfpenny, and they were sold to the public at one and fourpence, the profits were considerable; they were to have been kept in gold, so as to be freely available when required for the support of exchange.

A 16 pence Rupee.—The Government of India professed to accept all the recommendations of the Fowler Committee; actually only a portion of them was put in practice. The official rate of exchange was fixed at one and fourpence. The sovereign and the half sovereign were declared unlimited legal tender in India. But after a first attempt, when sovereigns soon came back to the treasuries, no effort was made to support the gold standard by an active gold currency. The gold mint was not set up. The Gold Standard Reserve was established, but instead of holding the Reserve in gold, it was invested in British securities. These practices gave rise to conditions which were never contemplated by the Fowler Committee. Reference has been made to the Home Charges of the Government of India, which at the time amounted to about seventeen millions sterling a year. These are met by the sale of what are called Council Bills. That is to say, the Secretary of State, acting on behalf of the Government of India

sold Bills against gold deposited in the Bank of England in London. These Bills when presented in India were cashed at the Government Treasuries. Now if the Secretary of State sold Council Bills only to meet his actual requirements, it follows that the balance of trade in favour of India over and above this figure would be liquidated, as it is in other countries, by the importation of bullion or by the creation of credits. It is a fact that owing to the failure of the policy of encouraging an active gold circulation to support the gold standard, gold tended to accumulate in India in embarrassing quantities. In 1904 therefore the Secretary of State declared his intention of selling Council Bills on India without limit at the price of one shilling fourpence one-eighth—that is to say gold import point. The effect of this policy was to limit the import of gold to India, for it was generally more convenient to deposit the gold in London and to obtain Council Bills against it, than to ship the gold to India. Nevertheless as the Egyptian cotton crop was very largely financed in sovereigns it was sometimes cheaper and more convenient to ship sovereigns from Egypt, or even from Australia, than to buy Council Bills. Considerable quantities of sovereigns found their way into India and circulated freely, particularly in the Bombay Presidency, the Punjab and parts of the Central Provinces.

Sterling Remittance.—This system worked until 1907-08. A partial failure of the rains in India in 1907, and the general financial stringency all over the world which followed the American financial crisis in the autumn, caused the Indian exchange to become weak in November. This was one of the occasions contemplated, in a different form, by the Fowler Committee when it proposed the formation of the Gold Standard Reserve. There had been very heavy coining of rupees in India and the amount in the Reserve was ample. But the Reserve was in securities not in gold, and was therefore not in a liquid form, nor was the time an opportune one for the realisation of securities. Moreover the authorities did not realise that a reserve is for use in times of emergency. It had been assumed that in times of weakness it would be sufficient for the Secretary of State to stop selling Council Bills, and it would firm up; meantime he would finance himself by drawing on the funds in the Gold Standard Reserve. But it was apparent that the stoppage of the sales of Councils was not enough; there was an insistent demand for the export of gold, or the equivalent of gold. The Government of India refused and exchange fell to one and threepence twenty-three thirty-seconds. Ultimately the authorities had to give way. It was decided to sell in India a certain quantity of sterling bills on London at one and threepence twenty-nine thirtyseconds, representing gold export point, and the equivalent of the export of gold. These were met in London from the funds in the Gold Standard Reserve. Bills to the extent of between eight and nine millions sterling were sold, which regularised the position and the Indian export trade recovered. Thus were gradually evolved the main principles of the Indian currency system. It consisted of silver rupees and rupee notes in India, with the sovereign and half sovereign unlimited legal tender at the rate of fifteen rupees to the sovereign, or one and fourpence. The rate of exchange was prevented from rising above gold import point by the unlimited sale of Council Bills at gold point in London; it was prevented from falling below gold point by the sale of Sterling Bills (commonly called Reverse Councils) at gold export point in India. But it was not the system proposed by the Fowler Committee, for there was no gold mint and only a limited gold circulation; some people invented for it the novel term of the gold exchange standard, a term unknown to the law of India. It was described by one of the most active workers in it as a "limping standard."

III. THE CHAMBERLAIN COMMITTEE.

This brings us to the year 1913. There were many critics of the system. Some hankered for a return to the open mints; others objected to the practice of unlimited sales of Council Bills as forcing rupees into circulation in excess of the requirements of the country. But the general advantages of a fixed exchange were so great as to smother the voices of the critics, and the trade and commerce of the country adjusted itself to the one and fourpenny rupee. But there gradually grew up a formidable body of criticism directed against the administrative measures taken by the India Office. These criticisms were chiefly directed at the investment of the Gold Standard Reserve in securities instead of keeping it in gold in India; at a raid on that reserve in order temporarily to relieve the Government of the difficulty of financing its railway expenditure; at the transfer of a solid block of the Paper Currency Reserve from India to London; at the holding of a portion of the Gold Standard Reserve in silver in order to facilitate the coining of rupees; and at the unlimited sales of Council Bills at rates which prevented the free flow of gold to India, thus forcing token rupees into circulation in quantities in excess of the requirements of the country. The cumulative effect of this policy was to transfer from India to London an immense block of India's resources, aggregating over seventy millions, where they were lent out at low rates of interest to the London bankers, whilst India was starved of money until at one point money was not available for loans even against Government securities and the bank rate was artificially high. All these things were done, it was contended, on the *obiter dicta* of a small Finance Committee of the India Office, from which all Indian influence was excluded, and on which London banking influence was supreme. The India Office for long ignored this criticism, until it was summarised in a series of articles in *The Times*, and public opinion was focussed on the discussion through the action of the India Office in purchasing a big block of silver for coining purposes from Messrs. Montagu & Co., instead of through their recognised and constituted agents, the Bank of England. The Government could no longer afford to stand aloof and yet another Currency Committee was appointed under the chairmanship of Mr. Austen Chamberlain. This is known as the Chamberlain Committee.

New Measures.—The conclusions of this Commission were that it was unnecessary to support the Gold Standard by a gold currency; that it was not to the advantage of India to encourage the internal use of gold as currency; that the internal currency should be supported by a thoroughly adequate reserve of gold and sterling; that no limit should be fixed to the amount of the Gold Standard Reserve, one half of which should be held in gold; that the silver branch of the Gold Standard Reserve should be abolished; that Reverse Councils should be sold on demand; that the Paper Currency should be made more elastic; and that there should be two Indian representatives out of three on the Finance Committee of the India Office. The Committee dealt inconclusively with the accumulation of excessive balances in London, the general tenor of their recommendations being "not guilty, but do not do it again." They gave a passing commendation to the idea of a State Bank. Sir James Begbie, the only Indian banker on the Committee, appended a vigorous minute of dissent, in which he urged that the true line of advance was to discourage the extension of the token currency by providing further facilities for the distribution of gold when increases to the currency became necessary, including the issue of an Indian gold coin of a more convenient denomination than the sovereign or the half sovereign.

IV. CURRENCY AND THE WAR

The report was in the hands of the Government of India shortly before the outbreak of the war. Some immediate steps were taken, like the abolition of the silver branch of the Gold Standard Reserve, but before the Government could deal entirely with the temporising recommendations of the Commission, the war broke out. The early effects of the war were precisely those anticipated. There was a demand for sterling remittance which was met by the sale of Reverse Councils, £8,707,000, being sold up to the end of January 1915. There were withdrawals from the Post Office Savings Banks, and a net sum of Rs 8 crores was taken away. There was some lack of confidence in the Note issue, and a demand for gold; Notes to the extent of Rs. 10 crores were presented for encashment and the Government were obliged to suspend the issue of gold But these were transient features and did not demand a moratorium; confidence was soon revived and Exchange and the Note issue continued strong. The difficulties which afterwards arose were from causes completely unanticipated by all students of the Indian currency they arose from an immense balance of trade in favour of India, caused by the demand for Indian produce for the United Kingdom and the Allies and the decline in the export trade from these countries; a heavy expenditure in India on behalf of the British Government; and a phenomenal rise in the price of silver If we take the three years 1916-17 to 1918-19 the balance of trade in favour of India was £6 millions a year above the corresponding years of the previous quinquennium. The disbursements in India on behalf of the Government of the United Kingdom and the Allies were by December 1919 £240,000,000. This balance of trade and expenditure for Imperial purposes could not be financed either by the import of the precious metals, owing to the universal embargo on the movement of gold and silver nor by credits in India. It could be financed only by the expansion of the Note issue, against sterling securities in the United Kingdom, chiefly Treasury Bills, and the issue of coined rupees But simultaneously there was a reduction in the output of the silver mines of the world coinciding with an increased demand for the metal. The price of silver in 1915 was 27¼ pence per standard ounce. In May 1919 it was 58 pence, on the 17th December of that year it was 78 pence The main difficulties in India were not therefore the prevention of the rupee from falling below the ratio of 15 to one, but to keep it within any limits and to provide a sufficiency to meet the demand.

Rise in Exchange.—The measures adopted by the Government of India in these emergencies were to bring exchange under rigid control, confining remittance to the finance of articles of national importance. The next step was to raise the rate for the sale of Council Bills, so that silver might be purchased at a price which would allow rupees to be coined without loss. The following table shows how rates were raised from one shilling fourpence to two shillings fourpence:—

Date of Introduction	Minimum Rate for Immediate Telegraphic Transfers
3rd January 1917 .	1 4¼
28th August 1917 .	1 5
12th April 1918 ..	1 6
13th May 1919 .	1 8
12th August 1919 .	1 10
15th September 1919 .	2 0
22nd November 1919 ..	2 2
12th December 1919 .	2 4

Rise in Exchange.—Silver for coining was purchased in large quantities, the following table showing the amount acquired by the Government of India in the last five years:—

	In open Market (Standard Ounces).	From United States Dollar Reserve (equivalent in Standard Ounces).
1915–16	8,636,000	—
1916–17	124,535,000	—
1917–18	70,923,000	—
1918–19	106,410,000	152,518,000
1919–20 (to 30th November 1919)	14,108,000	60,875,000
Total ..	324,612,000	213,393,000

The total amount is thus 538,005,000 standard ounces.

Gold and silver were taken under control and measures taken to prevent export and melting. Gold went to a premium and ceased to function as currency. The Note issue was expanded, and small Notes of one and two and a half rupees were specially prepared to economise the use of silver rupees. The nature of this expansion is shown below :—

Date.	Lakhs of Rupees.					
	Gross Note Circulation.	Composition of Reserve.				Percentage of Total Metallic Reserve to gross Note Circulation.
		Silver.	Gold.	Securities.	Total.	
31st March 1914 ..	66,12	20,53	31,59	14,00	66,12	78·9
,, 1915 ..	61,63	32,34	15,29	14,00	61,63	77·3
,, 1916 ..	67,73	23,57	24,16	20,00	67,73	70·5
,, 1917 ..	86,38	19,22	18,67	48,49	86,38	43·9
,, 1918 ..	99,79	10,79	27,52	61,48	99,79	38·4
,, 1919 ..	153,46	37,39	17,49	98,58	153,46	35·8
30th November 1919 ..	179,67	47,44	32,70	99,53	179,67	44·6

The facilities for the encashment of Notes were reduced. In these ways the Government were able to maintain the broad convertibility of the Note issue and finance the essential trades and expenditure for the Imperial Government. It often meant sailing very near to the wind, but these measures carried the country through the war.

V. THE 1919 COMMITTEE.

The effect of these measures however was to jettison the currency policy pursued from 1893 to 1915, the main object of which was to stabilise the rupee at one and fourpence. The war being over, a Committee was appointed to advise in regard to the future of Indian exchange and currency. It sat in 1919 and reported towards the end of the year. Its main recommendations are summarised below :—

(*i*) It is desirable to restore stability to the rupee and to re-establish the automatic working of the Indian currency system.

(*ii*) The reduction of the fineness or weight of the rupee, the issue of 2 or 3-rupee coins of lower proportional silver content than the present rupee, or the issue of a nickel rupee, are expedients that cannot be recommended.

(*iii*) The maintenance of the convertibility of the note issue is essential, and proposals that do not adequately protect the Indian paper currency from the risk of becoming inconvertible cannot be entertained.

(*iv*) The rise in exchange, in so far as it has checked and mitigated the rise in Indian prices, has been to the advantage of the country as a whole, and it is desirable to secure the continuance of this benefit.

(*v*) Indian trade is not likely to suffer any permanent injury from the fixing of exchange at a high level.

If, contrary to expectation, a great and rapid fall in world prices were to take place, and if the costs of production in India fail to adjust themselves with equal rapidity to the lower level of prices, then it might be necessary to consider the problem afresh.

(*vi*) The development of Indian industry would not be seriously hampered by a high rate of exchange.

(*vii*) The gain to India of a high rate of exchange for meeting the Home charges is an incidental advantage that must be taken into consideration.

(*viii*) To postpone fixing a stable rate of exchange would be open to serious criticism and entail prolongation of Government control.

(*ix*) The balance of advantage is decidedly on the side of fixing the exchange value of the rupee in terms of gold rather than in terms of sterling.

(*x*) The stable relation to be established between the rupee and gold should be at the rate of Rs. 10 to one sovereign, or, in other words, at the rate of one rupee for 11·30,016 grains of fine gold, both for foreign exchange and for internal circulation.

(*xi*) If silver rises for more than a brief period above the parity of 2s. (gold), the situation should be met by all other available means rather than by impairing the convertibility of the note issue. Such measures might be (*a*) reduction of sale of Council Bills ; (*b*) abstention from purchase of silver ; (*c*) use of gold to meet demands for metallic currency. If it should be absolutely necessary to purchase silver, the Government should be prepared to purchase even at a price such that rupees would be coined at a loss.

(*xii*) Council Drafts are primarily sold not for the convenience of trade but to provide for the Home charges in the wider sense of the term. There is no obligation to sell drafts to meet all trade demands ; but, if without inconvenience or with advantage the Secretary of State is in a position to sell drafts in excess of his immediate needs, when a trade demand for them exists, there is no objection to his doing so, subject to due regard being paid to the principles governing the location of the reserves.

Council Drafts should be sold as now by open tender at competitive rates, a minimum rate being fixed from time to time on the basis of the sterling cost of shipping gold to India. At present this rate will vary ; but when sterling is again equivalent to gold, it will remain uniform,

The Government of India should be authorised to announce, without previous reference to the Secretary of State on each occasion, their readiness to sell weekly a stated amount of Reverse Councils (including telegraphic transfers) during periods of exchange weakness at a price based on the cost of shipping gold from India to the United Kingdom.

(*xiii*) The import and export of gold to and from India should be free from Government control.

(*xiv*) The statutory minimum for the metallic portion of the Paper Currency Reserve should be 40 per cent. of the gross circulation.

As regards the fiduciary portion of the reserve, the holding of securities issued by the Government of India should be limited to 20 crores. The balance should be held in securities of other Governments comprised within the British Empire, and of the amount so held not more than 10 crores should have more than one year's maturity and all should be redeemable at a fixed date. The balance of the invested portion above these 30 crores should be held in short-dated securities, with not more than one year's maturity, issued by Government within the British Empire.

The sterling investments and gold in the Paper Currency Reserve should be revalued at 2s. to the rupee. The depreciatio which will result from this revaluation, cannot be made good at once, but any savings resulting from the rise in exchange will afford a suitable means of discharging this liability in a limited number of years

(*xv*) With a view to meeting the seasonal demand for additional currency, provision should be made for the issue of notes up to five crores over and above the normal fiduciary issue as loans to the Presidency Banks on the security of export bills of exchange.

Minority Report.—The main object of the Committee, it will be seen, was to secure a stable rate of exchange, without impairing the convertibility of the Note issue, and without debasing the standard silver rupee in India, or substituting another coin of inferior metallic content which would be debasement in another form. In order to attain these ends it was imperative to fix a ratio for the rupee in relation to gold which would ensure that the Government was able to purchase silver for coining purposes without more than temporary loss. For reasons given in the report they fixed this point at two shillings gold ; all other recommendations are subsidiary thereto. But in this they were not unanimous ; an important member of the Committee, Mr. Dadaba Dalal, of Bombay, appended a minority report in which he urged the adoption of the following courses :—

(*a*) The money standard in India should remain unaltered ; that is, the standard of the sovereign and gold mohur with rupees related thereto at the ratio of 15 to 1.

(*b*) Free and unfettered imports and exports by the public of gold bullion and gold coins.

(*c*) Free and unfettered imports and exports by the public of silver bullion and silver coins.

(*d*) The existing silver rupees of 165 grains of fine silver at present in circulation to continue full legal tender.

(*e*) As long as the price of silver in New York is over 92 cents, Government should not manufacture silver rupees containing 165 grains fine silver.

(*f*) As long as the price of silver is over 92 cents Government should coin 2 rupee silver coins of reduced fineness compared with that of the present silver rupee and the same to be unlimited legal tender.

(*g*) Government to sell Council Bills by competitive tenders for the amount defined in the Budget as required to be remitted to the Secretary of State. The Budget estimate to show under separate headings the amount of Council Bills drawn for Home Charges, for Capital Outlay and Discharge of Debt. Council Bills to be sold for Government requirements only and not for trade purposes, except for the purpose mentioned in the next succeeding recommendation.

(*h*) "Reverse" drafts on London to be sold only at 1s. 3 29-32d. The proceeds of "Reverse" drafts to be kept apart from all other Government funds and not to be utilised for any purpose except to meet drafts drawn by the Secretary of State at a rate not below 1s. 4 3-32d. per rupee.

VI. THE TWO SHILLING RUPEE.

The fundamental recommendation of the Committee was that the rupee should be linked to gold and not to sterling, in view of the decline in the value of sterling ; that it should be linked at the rate of two shillings instead of the standard value, one and fourpence : all other recommendations were ancillary to this. But it is very important to bear in mind the twofold problem which confronted the Committee. It would be quite easy to fix any low ratio provided the paper currency were made inconvertible, or the rupee debased to such a point that the Government in providing rupee currency, were independent of the price of silver. But if the convertibility of the rupee were to be maintained, and if the rupee were not to be debased, it was essential that the new ratio should be one at which the Government could reasonably rely on purchasing without loss the silver necessary to meet the heavy demands for rupee in India. For reasons set out in the Report, the Committee came to the conclusion that the Government could reckon on purchasing silver for coining at a little under two shillings gold, and that powerfully influenced them in fixing the new ratio at two shillings gold.

The Report Adopted.—The Currency Committee's Report was signed in December 1919 ; but it was not until February 1920 that action was taken thereon. In the first week of that month a Notification was issued in India accepting the principal recommendations in the Report and notifying that the necessary official action would be taken thereon. This action covered a wide field, but for the sake of clarity in this narrative we shall concentrate on the main issue,

the changing of the official monetary standard from fifteen rupees to the sovereign to ten rupees to the sovereign and its effect on Indian currency and trade. That may be summarised in a sentence. A policy which was avowedly adopted to secure fixity of exchange produced the greatest fluctuations in the exchanges of any solvent country and widespread disturbance of trade, heavy losses to Government, and brought hundreds of big traders to the verge of bankruptcy.

Financial Confusion.—This result was produced by many causes. It has been explained above that the essential features of the Indian currency system are the free sales of Council Bills at gold export point in London to prevent exchange from rising above the official standard and the sale of Reverse Councils in India at gold export point to prevent exchange from falling below the official standard. Now when the Currency Report was signed the Indian exchanges were practically at two shillings gold. But between the signing of the Report and the taking of official action, there was a sensational fall in the sterling exchanges, as measured in dollars, the dollar-sterling rate, inasmuch as America was the only free gold market, being the dominating factor in the situation. Consequently the Indian exchanges were considerably below the two shillings gold rate when the Notification accepting the Currency Committee's Report was issued. The Indian exchanges were two shillings and fourpence, and weak at that; the gold rate was about two shillings ninepence. There was an immediate and prodigious demand for Reverse Councils, to take advantage of this high rate of exchange; the market rate jumped up to two shillings eightpence.

Effect of the Rise.—The effect of a rise in exchange has been well described in the words of the Currency Committee's Report; it is that a rising exchange stimulates imports and impedes exports, the effect of a falling exchange is the reverse.

Now when the official notification of the two shilling rupee was made the Indian export trade was weak. The great consuming markets of Great Britain and America were glutted with Indian produce. The continent of Europe, which was starved of Indian produce and in urgent need of it, had not the wherewithal to pay for it nor the means of commanding credit. The only Indian staples which were in demand were foodstuffs, and as the rains of 1920 failed over a wide area, the Government were not able to lift the embargo on the export for foodstuffs, save to a limited extent in the case of wheat. On the other hand, the import trade was strong. Orders had been placed for machinery and other manufactured goods during the war and after the Armistice for delivery at the discretion of manufacturers. These began to come forward.

Difficulties Accentuated.—In accordance with the principles laid down by the Currency Committee these difficulties were accentuated by the action of Government in raising exchange by an administrative act. The weak export trade was almost killed. At the same time the temptation of a high exchange gave powerful stimulus to the import trade and orders were placed for immense quantities of manufactured goods, in which textiles filled an important place. Afterwards other forces intervened which accentuated the difficulties of the situation. There was a severe commercial crisis in Japan and this checked the export of Indian cotton. Japan is the largest buyer of Indian cotton, and when her merchants not only stopped buying but began to re-sell in the Indian markets, the trade was severely shaken and stocks accumulated at a great rate. Even before the 1920 crop came into the market the stocks in Bombay were double those in the corresponding period of the previous year. The expectations of a revival in the buying power of the Continent which were held in many quarters were disappointed and throughout the year there was a heavy balance of trade against India, which made the stabilisation of exchange at the high ratio attempted a hopeless proposition.

Confession of Failure.—Government struggled long against these conditions in the desperate hope that a revival of the export trade would come to their assistance, but they were further handicapped by the variations of the sterling-dollar exchange, which at one time took the rate for Reverse Councils to two shillings tenpence half penny. They sold two millions of Reverse Councils a week, then five millions, then dropped down to a steady million. But their policy only aggravated the situation. In addition to arresting the export trade and stimulating the import trade at a time when the precise converse was demanded, their action created an artificial movement for the transfer of capital from India to England. Large war profits accumulated in India since 1914 were hurriedly liquidated and transferred to England. Then the difference between the Reverse Council rate and the market rate, which on some occasions was several pence, induced gigantic speculations. The Exchange Banks set aside all their available resources for the purpose of bidding for Bills, and at once sold their allotments at substantial profits. Considerable groups of speculators pooled their resources and followed the same course. In this way the weekly biddings for the million of Reverse Councils varied from a hundred and 20 millions to a hundred and thirty millions and the money market was completely disorganised. The biddings assumed such proportions that it was necessary to put up fifty lakhs of rupees to obtain the smallest allotment made, five thousand pounds, and Reverse Councils and the large profits thereon came under the entire control of the Banks and the wealthy speculators. Various expedients were tried to remedy the situation but without the slightest effect.

Sterling for Gold.—The first definite break from the recommendations of the Currency Committee came at the end of June, when the Government announced that instead of trying to stabilise the rupee at two shillings gold they would aim at stabilising it at two shillings sterling, leaving the gap between sterling and gold to be closed when the dollar-sterling rate became par. The effect of this was to alter the rate at which Reverse Councils were sold from the fluctuating rate involved in the fluctuations of dollar-sterling exchange to a fixed sterling rate, namely one shilling elevenpence nineteen thirty seconds. But this had little practical effect. The biddings for Reverse Councils continued on a very big scale, and the market rate for exchange was always twopence or threepence below the Reverse

Council rate. This practice continued until the end of September, when it was officially declared that Reverse Councils would be stopped altogether. Exchange immediately slumped to between one and sixpence and one and sevenpence, and it continued to range between these narrow points until the end of the year. The market made its own rate; it made a more stable rate than the efforts of Government to attain an administrative stability.

Other Measures.—Apart from the effort to stabilise exchange, which had such unfortunate results, the policy of Government had certain other effects. During the year all restrictions on the movement of the precious metals were removed, in accordance with the recommendations of the Currency Committee. This included the abandonment of the import duty on silver, always a sore point with Indian bullionists. Legislative action was taken to alter the official ratio of the sovereign from fifteen to one to ten to one; due notice of this intention was given to holders of sovereigns and of the gold mohurs which were coined as an emergency measure in 1918, and they were given the option of tendering them at fifteen rupees. As the gold value of these coins was above fifteen rupees only a limited number was tendered, although there was extensive smuggling of sovereigns into India to take advantage of the premium. Then measures were adopted to give greater elasticity to the Note issue. Under the old law the invested proportion of the Note issue was fixed by statute and it could be altered only by altering the law or by Ordinance. An Act was passed fixing the metallic portion of the Paper Currency Reserve at fifty per cent. of the Note Issue, the invested portion being limited to Rs. 20 crores in Indian securities and the balance in British securities of not more than twelve months currency. The invested portion of the Paper Currency Reserve was revalued at the new rate of exchange, and an undertaking was given that the profits on the Note issue would be devoted to writing off the depreciation, as also would be the interest on the Gold Standard Reserve when the total had reached £40 millions. Further, in order to give greater elasticity to the Note issue, power was taken to issue Rs. 5 crores of emergency currency in the busy season against commercial bills. These measures, save the alteration of the ratio, were generally approved by the commercial public.

Results.—It remains to sum up the results of these measures. In a pregnant sentence in their report the Currency Committee say that whilst a fixed rate of exchange exercises little influence on the course of trade, a rising exchange impedes exports and stimulates imports, a falling exchange exercises a reverse influence. Here we have the key to the failure of the currency policy attempted. At the moment when it was sought suddenly and violently to raise the rate of exchange by the introduction of the new ratio of two shillings gold, the export trade was weak and the import trade in obedience to the delivery of long deferred orders was strong. The very principle enunciated by the Currency Committee wrecked the policy which they recommended. The rising rate of exchange scotched the weak export trade and gave a great stimulus to imports. Unexpected forces, such as the financial crisis in Japan, the lack of buying power on the Continent, and the movement for the transfer of capital from India to England at the artificially high rate of exchange stimulated these forces, but they had their origin in the attempt by administrative action artificially and violently to raise the rate of exchange. If let alone, the natural fall in exchange would have tended to correct the adverse balance of trade; the official policy exaggerated and intensified it. The effects on Indian business were severe. Exporters found themselves loaded with produce for which there was no foreign demand; importers found themselves loaded up with imported goods, bought in the expectation of the continuance of a high rate of exchange, delivered when it had fallen one and fourpence from the highest point reached. Immense losses were incurred by all importers, who when the year closed were struggling to liquidate their stocks in almost desperate conditions. The Government sold £55 millions of Reverse Councils before abandoning their effort to stabilise exchange at the new ratio; the loss on these—that is the difference between the cost of putting the funds down in London and in bringing them back to India—was Rs 35 crores of rupees. Government sold £53 millions of gold, without breaking or seriously affecting the premium on gold. The Secretary of State, in the absence of any demand for Council Bills, was able to finance his expenditure in England only through the lucky chance of heavy expenditure on behalf of the Imperial Government for the forces in Mesopotamia—this expenditure being made in India and set off by payments in London. The only advantages were a considerable contraction of the Note Issue and the silver token currency. In September the Viceroy announced that 1,238 lakhs of silver rupees had been returned to the currency making the metallic reserve 57 per cent., whilst the Note Issue had been reduced from Rs. 185 crores to 153 crores. These forces are set out in greater detail in the table below.

Public Criticism.—The Government's policy was bitterly criticised in India, especially by those engaged in commerce and industry. Their main complaint was that Government had no right to interfere with the established standards of value; that a high exchange was prejudicial to Indian trade and industry; that the sale of Reverse Councils was sacrificing the sterling resources of the country at ruinously low rates—the term "organised loot" was frequently used—and that exchange should be left to find its own level, with only the fixed legal minimum of one and fourpence, above which no Reverse Councils should be sold. Whilst it is not open to doubt that the recommendations of the Committee were conceived and applied in perfect honesty, however mistaken, unfortunately a large body of Indian commercial opinion could see in them nothing more than a deliberate attempt to stimulate the export trade of England at the expense of India and a very bitter feeling was produced by this widespread belief. Later, when the importers were hard hit, there was a demand from various quarters for the resumption of the sale of Reverse Councils but to this Government turned a deaf ear on the ground that without the collateral support of a revival of the export trade this would have no effect and Government would devote all their energies to the revival of the export trade.

Events in 1921.—It is a truism to say that exchange is not a force, but the expression of a force, namely the balance of trade, visible and invisible. From the narrative which has been given above two points emerge, namely that the Currency Committee of 1919 made a fatal error in concluding that silver would remain at anything like its war level, and that therefore it was necessary to raise the rupee to two shillings gold in order to be in a position to maintain the convertibility of the rupee by fresh rupee coining without loss on demand; and that the balance of trade in favour of India would be strong enough to maintain the new ratio. Silver fell like the stick of a rocket from its war level; the balance of trade has continued against India. For the official year ended March 31st, 1921, the balance of trade against India was Rs. 79 crores. Exchange fell to slightly below one and fourpence. Then there was a recovery, and in July, August-September of 1921 the balance of trade was in favour of India. Thereupon exchange began to rise. The process was stimulated by a good deal of speculation and the rate touched one and sixpence. But the October trade figures showed a big balance against India, and the November figures told the same tale. For the eight months of the current year the adverse trade balance is Rs. 25 crores. Exchange has therefore remained weak in the neighbourhood of one and fourpence, at which point it is relatively stable. When it fell it induced the export of gold; when it rose it induced the import of gold and silver, especially of gold for which there is a ready demand.

Improved Machinery.—In various ways the machinery for the adjustment of the trade balance of India has improved, without direct official action. Formerly in every season there was a frantic rush for Council Bills to provide the funds to finance the movement of the crops, and this in turn necessitated heavy purchases of silver and working the mints night and day in order to provide the necessary rupees. There are many signs that these conditions have materially changed. The Paper Currency Reserve is now so fully stocked with rupees that coining on a large scale is unlikely for some considerable time to come. Then the currency note is increasingly popular. Large areas like Bengal and Burma, where the cultivator would formerly take nothing but coined rupees in payment for his produce, now favour the Note; indeed in the current year the Note was more often at a premium than at a discount. Then whenever the price is favourable there is an immediate demand for gold for India. Moreover, in time of crisis that gold comes out. It used to be said that India was a sink for the precious metals and that all the gold and silver that went in was lost to the world's currency for ever; that is no longer the case and there were considerable shipments of gold from India in the current year. All these forces have tended to produce greater fluidity and stability. There are others. The supply of banking money in India is much larger, and that banking money is much more mobile since the three Presidency Banks of Bengal, Bombay and Madras have been merged into the Imperial Bank of India. Money can now be moved much more freely between the great centres than formerly. The issue of Treasury Bills by the Government of India has also exercised a balancing effect. Formerly money was almost a drug in the market during the slack season. The trade of India is now better distributed over the year and there is always an outlay for money in Treasury Bills; the Banker who had to be cautious lest he overloaded himself with deposits which were useless in the slack season can now take deposits with the confidence that they can be used all the year round, if not in trade then in Treasury Bills. This applies especially to the Exchange Banks, who can now keep their money in India during the slack season, instead of sending it to other quarters for remunerative employment. We cannot dogmatise now, because the demand for Indian produce is on a much smaller scale than it used to be and we do not know what would happen if there were a great revival of the export trade. But all the signs go to show that India has emerged from the stage when the export trade can only be financed during a good year by a frantic demand for Council Bills, a rush into the silver market and prodigious coining of token rupees.

VII. THE RESERVES.

Composition of the Currency Reserve held against the note circulation at the end of each month.

(In lakhs of rupees).

MONTH.	Gross circulation.	COIN AND BULLION RESERVE.									SECURITIES.
		Silver coin in India.	Gold coin and bullion in India.	Silver bullion under coinage.	Gold coin and bullion in England.	Silver bullion in England.	Gold coin and bullion in His Majesty's Dominions.	Gold coin and bullion in the U. S. A. and in transit therefrom.	Gold coin and bullion in transit between India and England and His Majesty's Dominions.	Silver bullion in transit between India and England, U. S. A. and His Majesty's Dominions.	
1920											
April	1,70,74	33,81	45,38	5,56	..	..	95	..	..	..	85,04
May	1,66,92	37,10	42,86	4,26	..	..	..	..	75	..	81,95
June	1,64,34	41,94	43,48	3,61	20	..	..	..	2,29	..	72,82
July	1,63,87	46,75	44,62	3,61	..	..	..	..	..	..	68,89
August	1,63,27	51,62	39,12	3,67	..	..	..	..	..	..	68,86
September	1,57,63	54,34	36,15	3,72	..	..	..	..	..	..	63,42
October	1,59,58	55,60	23,75	3,81	..	..	..	..	..	..	76,42
November .. .	1,60,21	56,05	23,86	3,88	..	..	..	..	..	..	76,42
December	1,61,40	57,13	23,89	3,96	..	..	..	..	..	..	76,42
1921											
January	1,63,41	58,95	24,00	4,04	..	..	..	..	..	..	76,42
February	1,64,60	60,03	24,06	4,09	..	..	..	..	..	..	76,42
March	1,66,16	61,42	24,17	4,15	..	..	..	..	..	..	76,42*

See note * on next page.

* Made up of :—

	Nominal Value.	Cost price.
In rupee securities—	Rs.	Rs. a. p.
3½ per cent. loan of 1842–43	8,15,95,000	8,00,00,000 0 0
3 per cent. loan of 1896–97	2,04,86,500	1,99,99,945 10 0
	10,20,81,500	9,99,99,945 10 0
Indian Treasury Bills	61,26,00,000	58,07,16,000 0 0
	71,46,81,500	68,07,15,945 10 0
	£ s. d.	£ s. d.
In sterling securities—		
British Treasury Bills	8,466,000 0 0	8,348,385 19 4
	8,466,000 0 0	8,348,385 19 4

Details of the balance of the Gold Standard Reserve on the 31st March 1921.

In England—

	£
Estimated value on the 31st March 1921 of the Sterling Securities of the nominal value of £40,123,243 (as per details below)	38,951,416
Cash at the Bank of England	4,883
Total ..	38,956,299

Details of investments :—

	Face value £
British Treasury Bills	24,559,000
Guaranteed 2¾ per cent. Stock	438,720
Transvaal Government 3 per cent. Guaranteed Stock (1923–53)	1,092,023
Exchequer 5½ per cent. Bonds, 1925	2,663,700
Ditto 1921	6,955,800
2½ per cent. Consolidated Stock	1,000,000
National 5 per cent. War Bonds	3,414,000
Total ..	40,123,243

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1).

HEADS OF REVENUE.	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20 (Revised Estimate).	1920–21 (Budget Estimate).	1919–20.
PRINCIPAL HEADS OF REVENUE:—	£	£	£	£	£	£	£	£
Land Revenue	21,221,539	22,031,161	22,041,265	21,607,246	21,089,944	22,090,800	23,797,800	22,609,943
Opium	1,572,218	1,913,514	3,160,005	3,078,903	3,289,111	2,990,800	2,942,000	3,037,481
Salt	3,910,790	3,647,587	4,826,260	5,499,487	4,277,989	3,754,000	4,488,400	3,831,954
Stamps	5,082,043	5,433,632	5,776,696	5,727,522	6,018,976	7,223,100	7,507,500	7,274,511
Excise	8,856,881	8,632,209	9,215,899	10,161,706	11,557,518	12,752,300	13,674,000	12,839,602
Provincial Rates	38,814	41,845	31,391	28,633	28,012	36,100	37,400	35,649
Customs	6,347,201	5,873,886	8,659,182	11,036,588	12,120,641	14,919,500	17,009,700	14,988,853
Assessed Taxes	2,036,733	2,090,109	3,772,967	6,308,104	7,758,462	15,771,000	11,390,400	15,471,896
Forest	1,980,652	2,074,128	2,470,795	2,731,284	3,121,255	3,659,800	3,770,900	3,578,386
Registration	485,295	518,879	540,581	527,590	572,652	723,800	745,200	723,663
Tributes from Native States	609,827	609,128	612,429	597,670	594,354	626,000	616,300	621,922
TOTAL	52,141,993	52,866,375	61,107,470	67,304,733	70,428,914	84,547,200	85,979,600	85,013,860
INTEREST	1,023,307	1,096,417	1,136,504	2,170,108	3,829,422	4,380,100	4,015,600	4,386,645
POST OFFICE	(a)	(a)	(a)	(a)	(a)			
TELEGRAPH	3,596,973	3,787,478	4,174,607	4,616,690	5,342,967	5,996,800	6,184,200	6,137,441
MINT	69,498	101,918	689,866	517,401	1,826,814	1,669,700	679,500	1,786,627
RECEIPTS BY CIVIL DEPARTMENTS:—								
Law and Justice:								
Courts of Law	404,568	413,545	414,799	435,150	420,943	485,600	464,700	911,387
Jails	296,534	290,225	345,725	379,683	511,728	417,300	398,700	
Police	141,281	143,199	155,038	133,246	185,837	170,600	140,000	232,273
Ports and Pilotage	140,330	125,394	123,419	102,997	132,176	136,700	150,600	139,529
Education	266,250	295,036	298,278	320,138	304,300	325,800	327,000	323,995
Medical	84,768	91,327	84,128	92,926	111,016	114,100	115,700	114,694
Sanitation	....	....	31,667	35,351	33,706	46,000	41,000	46,522
Agriculture	163,217	78,465	91,111	110,452	169,436	182,900	190,100	190,340
Scientific and other Minor Departments	(b) 108,173	(b) 133,713	(b) 195,548	325,421	225,660	278,400	251,700	304,975
TOTAL	1,505,120	1,579,904	1,739,713	1,935,364	2,094,802	2,157,400	2,079,500	2,283,715
MISCELLANEOUS RECEIPTS:—								
Receipts in aid of Superannuation, &c.	213,235	213,927	219,865	212,656	217,147	230,200	235,100	229,251
Stationery and Printing	97,594	89,134	96,034	94,049	120,358	134,600	134,500	132,677
Exchange	1,729	74,254	111,371	3,145,186	4,834,412	....	4,000,000	....
Miscellaneous	365,192	302,173	420,260	1,416,465	1,556,541	1,498,000	1,908,200	1,489,848
TOTAL	677,750	679,488	847,530	4,868,356	6,728,458	1,862,800	6,276,800	1,851,776

(a) Posts and Telegraphs. (b) Scientific and Miscellaneous Departments.

Note.—Budget estimates for 1921-22 having been drawn up on different lines and systems figures for revised estimates for 1920-21 and for budget estimates for 1921-22 cannot be given in the above statement

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1)—(*contd.*)

HEADS OF REVENUE.	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20 (Revised Estimate).	1920–21 (Budget Estimate).	1919–20.
	£	£	£	£	£	£	£	£
RAILWAYS:								
State Railways (Gross Receipts)	36,105,167	38,176,193	41,964,600	45,947,521	50,837,995	52,881,900	56,048,600	52,732,977
Deduct—								
Working Expenses and Surplus Profits paid to Companies.	20,376,709	20,290,504	20,749,538	21,899,799	25,982,023	31,504,600	34,440,000	31,651,154
Net Receipts	15,728,458	17,885,689	21,215,062	24,047,722	24,855,972	21,377,300	21,608,600	21,081,823
Guaranteed Companies (Net Traffic Receipts) ..	..	..	..	..	..	..	..	..
Subsidized Companies (Government share of Surplus Profits and Repayment of Advances of Interest).	70,691	91,414	98,735	93,986	106,267	230,000	166,100	230,986
TOTAL	15,799,149	17,977,103	21,313,797	24,141,708	24,962,239	21,607,300	21,774,700	21,312,809
IRRIGATION:								
Major Works:								
Direct Receipts	2,758,490	2,737,991	3,011,227	2,990,581	3,139,418	3,546,700	3,494,100	3,572,652
Portion of Land Revenue due to Irrigation ..	1,667,864	1,773,720	1,827,108	1,768,895	1,904,477	2,000,700	2,130,500	1,945,196
Minor Works and Navigation	254,615	267,368	317,289	304,403	302,612	296,200	320,600	315,020
TOTAL	4,680,969	4,779,079	5,155,624	5,063,879	5,346,507	5,843,600	5,945,200	5,832,868
OTHER CIVIL PUBLIC WORKS	288,219	304,035	309,373	323,599	347,649	363,500	371,300	369,934
RECEIPTS BY MILITARY DEPARTMENT:								
Army:								
Effective	971,846	816,434	993,194	1,183,582	1,726,026	1,296,500	1,167,700	2,215,235
Non-effective	124,345	123,509	122,324	120,348	116,416	5,475,800	98,800	106,393
	1,096,191	939,943	1,115,518	1,303,930	1,842,442	6,772,300	1,266,500	2,321,628
Marine	198,115	223,263	365,027	322,155	405,772	275,300	161,300	271,488
Military Works	80,382	78,534	95,401	94,424	101,758	94,000	92,000	108,496
TOTAL	1,374,688	1,241,740	1,575,946	1,720,509	2,349,972	7,141,600	1,519,500	2,701,612
TOTAL REVENUE ..	81,157,666	84,413,537	98,050,430	112,662,347	123,257,744	135,570,000	134,825,900	131,657,287

*The Railways.

The history of Indian Railways very closely reflects the financial vicissitudes of the country. Not for some time after the establishment of Railways in England was their construction in India contemplated, and then to test their applicability to Eastern conditions three experimental lines were sanctioned in 1845. These were from Calcutta to Raniganj (120 miles), the East Indian Railway; Bombay to Kalyan (33) miles, Great Indian Peninsula Railway; and Madras to Arkonam (39 miles), Madras Railway. Indian Railway building on a serious scale dates from Lord Dalhousie's great minute of 1853, wherein, after dwelling upon the great social, political and commercial advantages of connecting the chief cities by rail, he suggested a great scheme of trunk lines linking the Presidencies with each other and the inland regions with the principal ports. This reasoning commended itself to the Directors of the East India Company, and it was powerfully reinforced when, during the Mutiny, the barriers imposed on free communication were severely felt. As there was no private capital in India available for railway construction, English Companies, the interest on whose capital was guaranteed by the State, were formed for the purpose. By the end of 1859 contracts had been entered into with eight companies for the construction of 5,000 miles of line, involving a guaranteed capital of £52 millions. These companies were (1) The East Indian; (2) the Great Indian Peninsula; (3) the Madras; (4) the Bombay, Baroda and Central India; (5) the Eastern Bengal; (6) the Indian Branch, now the Oudh and Rohilkund State Railway; (7) the Sind, Punjab and Delhi, now merged in the North Western State Railway; (8) the Great Southern of India, now the South Indian Railway. The scheme laid the foundations of the Indian Railway system as it exists to-day.

Early Disappointments.

The main principle in the formation of these companies was a Government guarantee on their capital, for this was the only condition on which investors would come forward. This guarantee was five per cent. coupled with the free grant of all the land required; in return the companies were required to share the surplus profits with the Government, after the guaranteed interest had been met; the interest charges were calculated at 22*d.* to the rupee; the Railways were to be sold to Government on fixed terms at the close of twenty-five years and the Government were to exercise close control over expenditure and working. The early results were disappointing. Whilst the Railways greatly increased the efficiency of the administration, the mobility of the troops, the trade of the country, and the movement of the population, they failed to make profits sufficient to meet the guaranteed interest. Some critics attributed this to the unnecessarily high standard of construction adopted, and to the engineers' ignorance of local conditions; the result was that by 1869 the deficit on the Railway budget was Rs. 166½ lakhs. Seeking for some more economical method of construction, the Government secured sanction to the building of lines by direct State Agency, and funds were allotted for the purpose, the metre gauge being adopted for cheapness. Funds soon lapsed and the money available had to be diverted to converting the Sind and Punjab lines from metre to broad-gauge for strategic reasons. Government had therefore again to resort to the system of guarantee, and the Indian Midland (1882-85), since absorbed by the Great Indian Peninsula; the Bengal-Nagpur (1883-87), the Southern Maratha (1882), and the Assam-Bengal (1891) were constructed under guarantees, but on easier terms than the first companies. Their total length was over 4,000 miles.

Famine and Frontiers.

In 1879, embarrassed by famine and by the fall of the exchange value of the rupee, Government again endeavoured to enlist unaided private enterprise. Four companies were promoted.—the Nilgiri, the Delhi-Umballa-Kalka, the Bengal Central, and the Bengal North-Western. The first became bankrupt, the second and third received guarantees, and the Tirhut Railway had to be leased to the fourth. A step of even greater importance was taken when Native States were invited to undertake construction in their own territories, and the Nizam's Government guaranteed the interest on 330 miles of line in the State of Hyderabad. This was the first of the large system of Native State Railways. In the first period up to 1870 4,255 miles were opened, of which all save 45 were on the broad gauge; during the next ten years there were opened 4,239, making the total 8,494 (on the broad gauge 6,562, the metre 1,865, and narrow 67). Then ensued a period of financial ease. It was broken by the fall in exchange and the costly lines built on the frontier. The Penjdeh incident, which brought Great Britain and Russia to the verge of war, necessitated the connection of our outposts at Quetta and Chaman with the main trunk lines. The sections through the desolate Harnai and Bolan Passes were enormously costly; it is said that they might have been ballasted with rupees; the long tunnel under the Khojak Pass added largely to this necessary, but unprofitable outlay.

Rebate Terms Established.

This induced the fourth period—the system of rebates. Instead of a gold subsidy, companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the dividend might rise to four per cent. but the rebate was limited to 20 per cent. of the gross earnings. Under these conditions, there were promoted the Ahmedabad-Prantej, the South Behar, and the Southern Punjab, although only in the case of the first were the terms strictly adhered to. The Barsi Light Railway, on the two feet six inches gauge, entered the field without any guarantee, and with rolling stock designed to illustrate the carrying power of this gauge. The rebate terms being found unattractive in view of the competition of 4 per cent. trustee stocks; they were revised in 1896 to provide for an

* *We have held back this section until February 21 for later figures but they are not available.*

absolute guarantee of 3 per cent. with a share of surplus profits, or rebate up to the full extent of the main line's net earnings in supplement of their own net earnings, the total being limited to 3½ per cent. on the capital outlay. Under these terms, a considerable number of feeder line companies was promoted, though in none were the conditions arbitrarily exacted. As these terms did not at first attain their purpose, they were further revised, and in lieu was substituted an increase in the rate of guarantee from 3 to 3½ per cent. and of rebate from 3½ to 5 per cent. with equal division of surplus profits over 5 per cent. in both cases. At last the requirements of the market were met, and there has since been a mild boom in feeder railway construction and the stock of all the sound companies promoted stands at a substantial premium.

Railway Profits Commence.

Meantime a much more important change was in progress. The gradual economic development of the country vastly increased the traffic, both passenger and goods. The falling in of the original contracts allowed Government to renew them on more favourable terms. The development of irrigation in the Punjab and Sind transformed the North-Western State Railway. Owing to the burden of maintaining the unprofitable Frontier lines, this was the Cinderella Railway in India—the scapegoat of the critics who protested against the unwisdom of constructing railways from borrowed capital. But with the completion of the Chenab and Jhelum Canals, the North-Western became one of the great grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the State. In 1900 the railways for the first time showed a small gain to the State. In succeeding years the net receipts grew rapidly. In the four years ended 1907-08 they averaged close upon £2 millions a year. In the following year there was a relapse. Bad harvests in India, accompanied by the monetary panic caused by the American financial crisis, led to a great falling off in receipts just when working expenses were rising, owing to the general increase in prices. Instead of a profit, there was a deficit of £1,240,000 in the railway accounts for 1908-09. But in the following year there was a reversion to a profit, and the net Railway gain has steadily increased. For the year ended March 1919 this gain amounted to £ 10,858,379. Although in a country like India, where the finances are mainly dependent upon the character of the monsoon, the railway revenue must fluctuate, there is no reason to anticipate a further deficit, but every ground for hoping that the railway profits will fill the vacuum in the Indian revenues caused by the cessation of the opium trade with China.

Contracts Revised.

A very important factor in this changed position is the revision of the original contracts under which the guaranteed lines were constructed. The five per cent. dividend, guaranteed at 22*d.* per rupee, and the half-yearly settlements made these companies a drain on the State at a time when their stock was at a high premium. The first contract to fall in was the East Indian, the great line connecting Calcutta with Delhi and the Northern provinces. When the contract lapsed, the Government exercised their right of purchasing the line, paying the purchase-money in the form of terminable annuities, derived from revenue, carrying with them a sinking fund for the redemption of capital. The railway thus became a State line; but it was released to the Company which actually works it. Under these new conditions the East Indian Company brought to the State in the ten years ended 1909; after meeting all charges, including the payments on account of the terminable annuity by means of which the purchase of the line was made, and interest on all capital outlay subsequent to the date of purchase, a clear profit of nearly ten millions. At the end of seventy-four years from 1880, when the annuity expires, the Government will come into receipt of a clear yearly income of upwards of £2,700.000, equivalent to the creation of a capital of sixty to seventy millions sterling. No other railway shows results quite equal to the East Indian, because, in addition to serving a rich country by an easy line, it possesses its own collieries and enjoys cheap coal. But with allowance for these factors, all the other guaranteed companies which have been acquired under similar conditions as their contracts expired, have proportionately swelled the revenue and assets of the State. It is difficult to estimate the amount which must be added to the capital debt of the Indian railways in order to counterbalance the loss during the period when the revenue did not meet the interest charges. According to one estimate it should be £50 millions. But even if that figure be taken Government have a magnificent asset in their railway property.

Improving Open Lines.

These changes induced a corresponding change in Indian Railway policy. Up to 1900 the great work had been the provision of trunk lines. But with the completion of the Nagda-Muttra line, providing an alternative broad gauge route from Bombay to Delhi through Eastern Rajputana, the trunk system was virtually complete. A direct broad gauge route from Bombay to Sind is needed, but chiefly for strategic purposes. The poor commercial prospects of the line and the opposition of the Rao of Cutch to any through line in his territories, keep this scheme in the background. There does not exist any through rail connection between India and Burma, although several routes have been surveyed: the mountainous character of the region to be traversed, and the easy means of communication with Burma by sea, rob this scheme of any living importance. Further Survey work was undertaken in November 1914, the three routes to be surveyed being the coast route, the Manipur route, and the Hukong valley route. The metre gauge systems of Northern and Southern India must also be connected and Karachi given direct broad-gauge connection with Delhi, a project that is now under investigation. But these works are subordinate to the necessity for bringing the open lines up to their traffic requirements and providing them with feeders. The sudden

increase in the trade of India found the main lines totally unprepared. Costly works were necessary to double lines, improve the equipment, provide new and better yards and terminal facilities and to increase the rolling stock. Consequently the demands on the open lines have altogether overshadowed the provision of new lines. Even then the railway budget was found totally inadequate for the purpose, and a small Committee sat in London, under the chairmanship of Lord Inchcape, to consider ways and means. This Committee found that the amount which could be remuneratively spent on railway construction in India was limited only by the capacity of the money market. They fixed the annual allotment at £12,000,000 a year. Even this reduced sum cannot always be provided.

Government Control.

As the original contracts carried a definite Government guarantee of interest, it was necessary for Government to exercise strong supervision and control over the expenditure during construction, and over management and expenditure after the lines were open for traffic. For these purposes a staff of Consulting Engineers was formed, and a whole system of checks and counterchecks established, leading up to the Railway Branch of the Public Works Department of the Government of India. As traffic developed, the Indian Railways outgrew this dry nursing, and when the original contracts expired, and the interests of Government and the Companies synchronised, it became not only vexatious but unnecessary. Accordingly in 1901-02 Mr. Thomas Robertson was deputed by the Secretary of State to examine the whole question of the organisation and working of the Indian Railways, and he recommended that the existing system should be replaced by a Railway Board, consisting of a Chairman and two members with a Secretary. The Board was formally constituted in March 1905. The Board is outside, but subordinate to the Government of India in which it is represented by the Department of Commerce and Industry. It prepares the railway programme of expenditure and considers the greater questions of policy and economy affecting all the lines. Its administrative duties include the construction of new lines by State agency, the carrying out of new works on open lines, the improvement of railway management with regard both to economy and public convenience, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and the general supervision over the working and expenditure of the Company's lines. Two minor changes have taken place since the constitution of the Railway Board. In 1908, to meet the complaint that the Board was subjected to excessive control by the Department of Commerce and Industry, the powers of the Chairman were increased and he was given the status of a Secretary to Government with the right of independent access to the Viceroy; he usually sits in the Imperial Legislative Council as the representative of the Railway interest. In 1912 in consequence of complaints of the excessive interference of the Board with the Companies, an informal mission was undertaken by Lord Inchcape to reconcile differences. The constitution of the Board is now undergoing further inquiry, and the development generally favoured in the establishment of a Railway Member of the Viceroy's Executive Council.

Management.

The Railways managed by Companies have Boards of Directors in London. They are represented in India by an Agent, who has under him a Traffic Manager, a Chief Engineer, a Locomotive Superintendent, a Storekeeper, a Police Superintendent, (who is appointed by Government), and an Auditor The State Railways are similarly organised.

Clearing House.

Proposals have several times been made for the establishment of a Clearing House but the distances are too great. The work which would ordinarily be done by the Clearing House is done by the Audit Office of each Railway.

The Railway Conference.

In order to facilitate the adjustment of domestic questions, the Railway Conference was instituted in 1876. This Conference was consolidated into a permanent body in 1903 under the title of the Indian Railway Conference Association. It is under the direct control of the railways, it elects a President from amongst the members, and it has done much useful work.

The Indian Gauges.

The standard gauge for India is five feet six inches. When construction was started the broad gauge school was strong, and it was thought advisable to have a broad gauge in order to resist the influence of cyclones. But in 1870, when the State system was adopted it was decided to find a more economical gauge, for the open lines had cost £17,000 a mile. After much deliberation, the metre gauge of 3 feet 3⅜ inches was adopted, because at that time the idea of adopting the metric system for India was in the air. The original intention was to make the metre gauge lines provisional, they were to be converted into broad gauge as soon as the traffic justified it: consequently they were built very light. But the traffic expanded with surprising rapidity, and it was found cheaper to improve the carrying power of the metre gauge lines than to convert them to the broad gauge. So, except in the Indus Valley, where the strategic situation demanded an unbroken gauge, the metre gauge lines were improved and they become a permanent feature in the railway system. Now there is a great metre gauge system north of the Ganges connected with the Rajputana lines and Kathiawar. Another System in Southern India embracing the Southern Maratha and the South India Systems. These are not yet connected, but the necessary link from Khandwa by way of the Nizam's Hyderabad-Godaveri Railway, cannot be long delayed. All the Burma lines are on the metre gauge. Since the openin of the Barsi line, illustrating the capacity of the two feet six inch gauge, there has been developed a tendency to construct feeders on this rather than on the metre gauge.

STATISTICAL POSITION.

During the year 1919-20, in spite of the cessation of hostilities between the principal powers, little relief was experienced from the demands on Indian Railways. The Military concentration on the North-Western Frontier, labour unrest in Europe, and disturbances in India impeded the improvement and re-equipment that was hoped for and might otherwise have been expected.

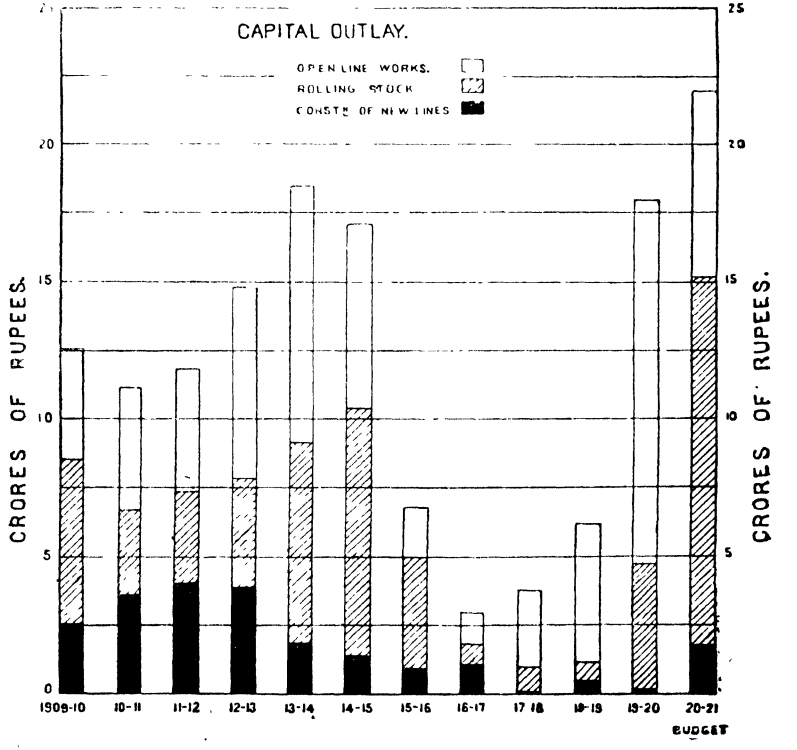
Gross earnings showed an increase over the figures of the preceding year of nearly three crores of rupees. On the other hand the percentage of working expenses to gross earnings increased considerably. This was partly due to the fact that the conditions of service of railway servants were improved by material increases in the scale of wages and salaries, and partly due to the very high prices demanded for materials, essential both for maintenance purposes and for raising the standard of efficiency that had been relaxed during the years of the war. This process of improvement necessarily tends to increase working expenses, and it will no doubt take time to reduce such costs to normal proportions, owing to the amount of lost ground that has to be recovered and to the fact that the available supplies of railway material throughout the world are not at present equal to the demand.

The capital outlay incurred by the Government in the purchase and construction of its railways, including the liability which remains to be discharged by means of Annuity and Sinking Fund payments, amounted at the end of 1919-20 to £380,768,116.

The outlay incurred during 1919-20 was £12,054,706, distributed as follows:—

	Rs.
Open Line Works (including Suspense)	13,31,01,592
Rolling-stock	4,56,36,000
New Lines	20,83,000
Total . .	18,08,20,592
Equivalent at Rs. 15 to £1 to . .	12,054,706

The following diagram shows graphically how these figures compare with those of past years. The distribution of the grant of £21·98 millions (Rs. 2,198 lakhs) which has been sanctioned for the financial year 1920-21 is also added for purposes of comparison :—



During the year 1919-20 the actual capital expenditure fell short of the sanctioned grant for the year by Rs. 8·48 crores. This lapse was attributable mainly to the credit to the capital account of gain by exchange on sterling outlay in England and to the difficulties attendant on the supply of railway materials from England.

The capital expenditure provided for in the budget for 1920-21 is Rs. 2,198 lakhs (Net). This is again a record figure and is partly accounted for by the heavy liability carried over from the previous year owing to the failure of the supply of English materials in 1919-20. The programme has been designed to provide, as far as possible, for the improvement of traffic facilities, which have been unavoidably deferred during the war and are now urgently required to meet a rapidly expanding trade. It has been possible therefore only to spare a small amount for lines in progress and new construction. Provision has, however, been made for the replacement of some of the lines which were dismantled during the war.

The actual capital outlay on railways, which have been financed by private enterprise, such as branch lines promoted by Companies, District Board Lines, Indian State Lines, etc., amounted at the end of 1919-20 to Rs. 70,27,66,000. The capital expenditure on such lines during the year was as follows:—

	Rs.
Branch Line Companies' Railways ..	28,32,000
District Board Lines	22,000
Indian State Lines	49,32,000
TOTAL	77,86,000

Private Enterprise.—The Branch Line Terms, as they are now generally called, have undergone no change but the question of their revision is one of the matters to come under the consideration of the Indian Railways Committee.

As the Branch Line Terms stand at present, their main feature is the grant by the Government of India of financial assistance to companies or local bodies obtaining concessions for the construction of feeder lines to existing railways in one or other of the following forms:—

(1) a firm guarantee by Government of a return of 3½ per cent. on share capital as actually paid up;

(2) a rebate paid by the parent line from its net earnings from traffic brought to it by the branch, sufficient to make up a dividend of 5 per cent. on share capital as actually paid up; the liability of the parent line being, however, limited to the total of its net earnings from such traffic

Concessionaries are also given the option, under certain circumstances of raising a portion of their capital under guarantee terms and the remainder under rebate terms while in the province of Assam, in consideration of the relatively less developed state of the country and the difficulty experienced in obtaining capital for private railway enterprise under the ordinary terms, it has been provided that the Local Administration may, in approved cases, supplement the Imperial Guarantee of 3½ per cent. described above by the grant from provincial funds of an additional guarantee for a specified term of years of 1 per cent on the share capital as actually paid up.

No concessions were granted during the year either to companies or to local bodies for the construction of new railways; but following the policy described in previous reports, the Railway Board have carried on negotiations with branch line promoters in regard to projects which were already either under consideration before the war or have since been put forward. The result has shown that the present branch line terms require considerable revision as most of the projects have had to be held over owing to the inability of promoters to finance their construction under the existing terms and present financial conditions.

Pending, however, the consideration of the whole subject by the Indian Railways Committee, the Railway Board have decided to deal, on their merits, with the more urgent and important projects awaiting construction.

IMPORTANT LINES UNDER CONSTRUCTION.

Southern Shan States Railway.—The first and second sections of this railway from Thazi to Aungban was opened for traffic in March 1915. Considerable progress is being made on the construction of the third section from Aungban to Heho. The greater portion of the formation earthwork, together with some masonry work on bridges, was carried out by Turkish prisoners of war during the year. The remainder of the work is now in progress and the laying of rails has commenced.

Itarsi-Nagpur Railway.—The whole project, 238 miles in length, will, when completed, form part of a direct through North and South broad gauge connection, but as so far constructed, it furnishes an additional outlet for the traffic of the Pench Valley Coal-fields, an important source of coal supply.

The Northern Section, Itarsi to Amla (80·56 miles), was completed and opened for traffic in September 1914. The Eastern Section, Amla to Parasia or the Pench Valley Branch (53·86 miles) was completed and opened for traffic in November 1915.

On the Southern Section, Amla to Nagpur (103·74 miles), the work on tunnels and earthwork is in hand only between Amla and Pandhurna; all other work on this section has been held up owing to the inability at present to provide the necessary funds.

Overhead Connection at Bombay.—The construction of the Bombay overhead connection from Tank Bunder on the Bombay Harbour Branch to Victoria Terminus (2·12 miles, double line) was commenced in 1912. The construction involves much heavy work in the heart of the city and the delay in completion is due to the difficulty in obtaining the necessary steel and girder work. When completed, this construction will provide easy and rapid communication between the busi-

ness centre of Bombay and the cotton market and grain warehouses near Mazagaon.

The Secunderabad-Gadwal Railway.—This line is the property of His Exalted Highness the Nizam's Government, and when completed will link up the metre-gauge system of the Hyderabad State with the metre-gauge sections of the Madras and Southern Mahratta and South Indian Railways, thus affording an outlet to the Port of Mormugao from the southern parts of the Hyderabad States.

The section from Secunderabad to Wanaparti Road (103·30 miles) have been open to traffic since April 1917. The construction of the further extension is held up due to the present difficulty in obtaining the necessary permanent-way material.

The open sections are being worked by the Nizam's Guaranteed State Railways Company.

Nushki Extension Railway.—The extension of the Quetta-Nushki Railway was started in September 1916. The first 13 miles of line, from Nushki to Ahmedwal, was opened for passenger traffic in April 1919, and a further 101·92 miles, from Ahmedwal to Dalbandin, on the 1st October 1919. The construction of a further extension from Dalbandin to Mirjawa (185·00 miles) is well advanced, and it is anticipated that it will be opened for traffic in 1920-21.

The country passed through is desert but topographically easy, being a series of gentle undulations of sand and shingle merging into stone covered with clay and salty conglomerate.

NEW CONSTRUCTION IN INDIAN STATES.

The progress of new construction in Indian States has suffered from the universal shortage in the supply throughout the world of permanent-way materials and rolling-stock.

The following is the only new line sanctioned during the year—

MYSORE.

	Length in miles.
Nanjangud-Hardanhalli (metre-gauge	27·12

The following table gives a complete list of railways which were under construction in Indian States during the year :—

BARODA STATE.

Railways.	Length in miles.
1. Choranda-Koral (2-6″ gauge) ..	11 68
2. Bhoyani Road-Bechraji (metre-gauge)	22 12
3. Motipura-Tankhala (2′-6″ gauge)	26 29

BHAVNAGAR.

Savar Kundla-Mahuva with branch to Port Albert Victor (metre-gauge)..	54·30

JAIPUR.

1. Palsana-Sikar (metre-gauge) ..	16·80
2. Sikar-Jhunjnu (metre-gauge) ..	39·85

JODHPUR.

Marwar-Sanderao (metre-gauge) ..	77 83

JUNAGAD.

Jambur-Una (metre-gauge)	37·22

MYSORE.

1. Tadasa-Hebbe (2′-0″ gauge) ..	9·58
2. Chickjajur-Chitaldrug (metre-gauge)	20·90
3. Shimoga-Arasalu (metre-gauge) ..	26·80
4. Kammangundi-Benkipur (2′-0″ gauge)	22 80
5. Agasanhadlu-Benkipur (2′-0″ gauge)	24·50
6. Nanjangud-Hardanhalli (metre-gauge)	27·12

The following railways have been held in abeyance during the year for the reasons mentioned :—

The Okhamandal (metre-gauge, 37·02 miles) in the Baroda State has been postponed until the construction of the Jamnagar-Dwarka Railway, which has since been sanctioned.

The Anjar-Bachau (2′-6″ gauge, 23·75 miles) in the State of Cutch, and the Wanaparti Road-Gadwal (metre-gauge, 13 45 miles) in the Hyderabad State, have both been postponed owing to the difficulty in obtaining the requisite permanent-way.

Amongst the Indian States which now own railways are:—

Hyderabad (875 miles), Baroda (546 miles), Bhavnagar (206 miles), Gondal (128 miles), Mysore (433 miles), Jodhpur (635 miles), Bhopal (77 miles), Patiala (108 miles), Morvi (93 miles), Junagad (154 miles), Porbandar (41 miles), Kashmir (16 miles), Kolhapur (29 miles), Bikaner (498 miles), Rajkot (4 miles), Jetpur (8 miles), Cooch Behar (33 miles), Gwalior (474 miles), Mewar (67 miles), Navanagar (54 miles), Rajpipla (39 miles), Dhrangadra (40 miles), Kotah (37 miles), Parlakimedi (25 miles), Cambay (12 miles), Maler Kotla (45 miles), Jind (59 miles), Cochin (65 miles), Travancore (96 miles), Cutch (37 miles), Jaipur (122 miles), Mourbhanj (32 miles), Dholpur (52 miles), Sangli (5 miles), Bahawalpur (22 miles) and Chhota Udaipur (11 miles).

The total mileage of railways in Indian States open to traffic at the close of the year was 5,178 miles distributed between the various gauges as under—

	Miles.
5′-6″ gauge	962
3′-3¾″ or metre-gauge	3,318
2′-6″ gauge	596
2′-0″ gauge	302

Fuel.—In 1919, the coal mined in India amounted to 22,628,037 tons against 20,722,493 tons in 1918. Despatches of coal by the East Indian and Bengal-Nagpur Railways from the coal-fields of Bengal and Bihar and Orissa exceeded those of the previous year by 16,967 tons.

The total quantity of coal despatched from the main coal-fields of India is as follows. —

	Tons.
Bengal, Bihar and Orissa collieres..	15,524,397
Singareni collieries	543,386
Pench Valley ,, ...	257,895
Umaria ,, ...	157,151
Total despatched by rail .	16,482,829

The regular use of oil-fuel for locomotives on certain sections of the Great Indian Peninsula and of the North-Western Railways continues. At the end of the year under review, there were on the North-Western Railway 129 engines burning oil-fuel and a storage capacity of 19,300 tons of the same fuel on the Karachi District.

Accidents.—The total number of persons of all classes killed by causes beyond their own control was 157 against 66 and the number injured 500 against 332 in 1918-19, the increase was chiefly due to the large number of persons killed in the derailment between Uchhri and Chhab stations on the North Western Railway and the collisions referred to below.

Out of a total of 520 millions passengers travelling 470 were killed and 1,395 injured, while of the former 85 were killed through causes beyond their own control.

Labour Unrest.—During the year 1919-20 the continued labour unrest amongst railway employees resulted in a number of strikes. The economic situation and the general unrest after the war gave rise to these outbreaks, but in the majority of cases the workmen ceased work without informing those in authority what their grievances were. Strikes of importance occurred on the Bengal and North-Western, Rohilkund and Kumaon and East Indian Railways. That which occurred at the Jamalpur shops of the East Indian Railway resulted in some 10,000 workmen staying out from the 1st December 1919 to the 15th January 1920 when the men resumed work unconditionally

As a result of the rise in the cost of living, wages went up all over the country during the year—though in some localities more than in others, and the grant of increased pay or of special temporary allowances, was, as a consequence, general on railways. The increases given to the lowest paid establishments were in many cases 50 per cent. over pre-war rate, other grades benefitted in proportion

Railway Committee.—Several important questions regarding the whole future of the Indian Railways were raised by the termination of the contract with the East Indian Railway. In order to carry the administration for the war period, the East Indian Railway contract was temporarily renewed and an Indian Railway committee was appointed in 1920 to investigate the whole question of railway management and railway finance. This Committee commenced investigation in India in the cold weather of 1920 under the presidency of Sir W. M. Acworth.

Results of Working.

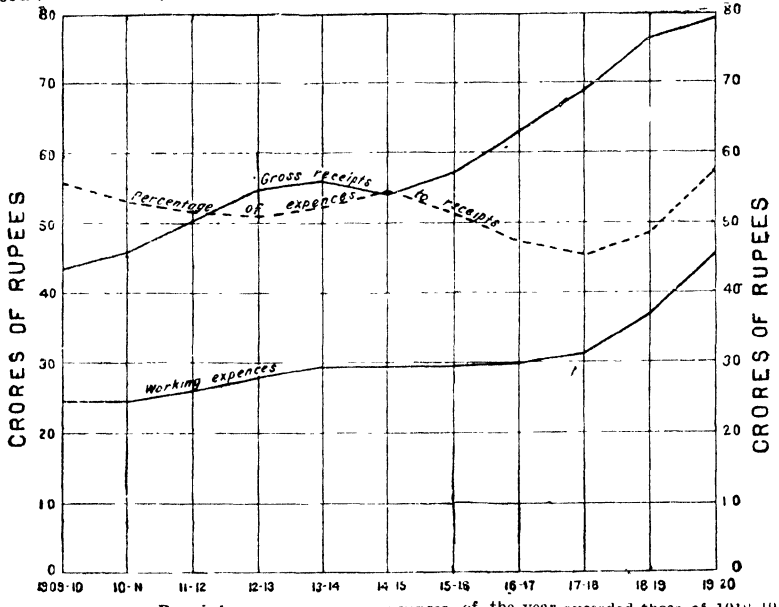
The following table compares the financial results attained in the working of the State Railways during the year 1918-19 with those of previous years (in the case of money the figures are shown in thousands) '—

——	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£	£
Capital at charge at end of each year	361,500	364,858	365,483	366,463	369,213	379,809
REVENUE.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Gross traffic receipts.—State Railways	54,15,78	57,26,43	62,94,69	68,92,13	76,25,70	79,09,95
Deduct.—Working Expenses	29,52,87	29,53,00	29,96,86	31,35,81	37,07,67	46,46,75
Net Receipts ..	24,62,91	27,73,43	32,97,83	37,56,32	39,18,03	33,63,20
	£	£	£	£	£	£
Equivalent in sterling Rs. 15=£1	16,419	18,489	21,986	25,042	26,120	22,421
Percentage of return on capital at charge ..	4·54	5·06	6·02	6·83	7·07	5·90

The net working profit from State Railways, after meeting interest and other miscellaneous charges, and certain Annuity and Sinking Fund payments which go to the discharge of debt, amounted in the year 1919-20 to £ 6,963,817.

Expenditure.

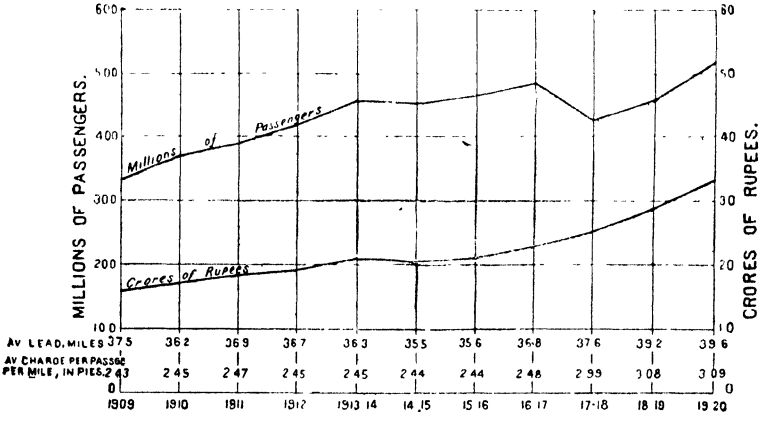
The gross receipts and revenue expenditure of the State lines worked by the State and companies for the past eleven years compared in the following diagram :—



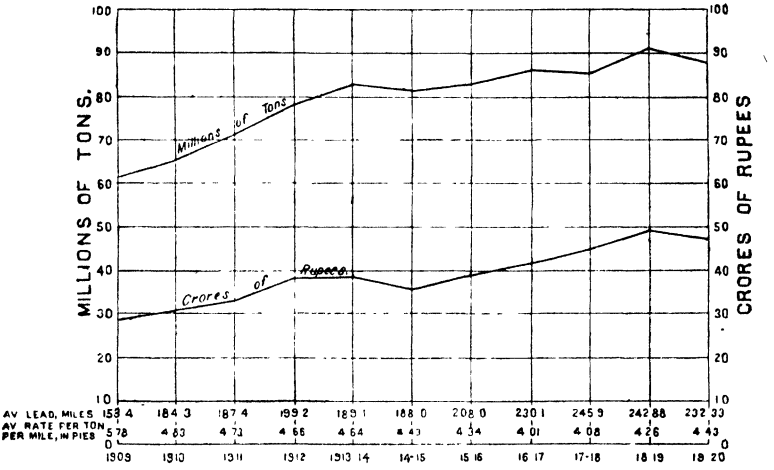
Receipts.

The receipts during the year 1919-20 amounted to Rs. 79.10 crores or Rs. 2.84 crores more than the actuals of 1918-19. This substantial improvement was attributable mainly to the increase in railway traffic. The working expenses of the year exceeded those of 1918-19 by Rs. 8·39 crores. The increase was due to a larger programme of special repairs and renewals to the enhanced scales of pay of all grades sanctioned generally on railways and to the increase in the train mileage run.

Passenger Traffic.—The numbers of passengers carried and the earnings therefrom on all Indian railways are compared below :—



The increase in the passenger traffic compared with 1918-19 was chiefly due to the general development of traffic after the termination of the war.



The decrease in the goods traffic as compared with 1918-19 was partly due to the large falling off in military stores owing to the cessation of hostilities and partly to the smaller traffic in coal, edible grains and sugar.

The gross earnings of railways other than State lines, such as District Boards' lines, Indian State lines, etc., during 1919-20 amounted to Rs. 1,023·88 lakhs, as compared with Rs. 993·37 lakhs in 1918-19, being an increase of only Rs. 30·51 lakhs, and as the working expenses were more by Rs. 35·09 lakhs than the previous year the net earnings showed a decrease of Rs. 4·58 lakhs, having fallen from Rs. 495·63 lakhs in 1918-19 to Rs. 491 05 lakhs in 1919-120. These net earnings yielded a return on the capital outlay Rs. 68,50,70 lakhs on open lines, that is, on mileage earning revenue, of 7·17 per cent. as against 7·36 per cent. in 1918-19.

During the year 1919-20, 119·34 miles of railway were opened to traffic bringing the total mileage open (after allowing for dismantlements, and minor corrections due to realignments, etc.) up to 36,735 miles. The additional mileage was made up as follows :—

—	5′ 6″ gauge.	3′ 3⅜″ gauge.	2′ 6′ gauge.	2′ 0″ gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State ..	..	6·25	..	..	6·25
Branch line Companies' railways under guarantee terms, worked by the main line.	..	50·81	..	..	50·81
Branch line Companies' railways under rebate terms, worked by the main line.	13·98	..	..	..	13·98
Unassisted Companies' lines	..	..	20·50	..	20·50
District Board lines	..	22·94	..	..	22·94
Indian State lines worked by Indian States.	..	4·86	..	..	4·86
TOTAL ..	13·98	84·86	20 50	..	119·34

Ten Years' Progress.—The progress made during the past ten years is summarised in the following table :—

Gauge.	Mileage open at the end of									
	1910.	1911.	1912	1913-14.	1914-15.	1915-16.	1916-17	1917-18.	1918-19.	1919-20.
5′6″ ..	16,701	17,016	17,189	17,641	17,827	18,060	18,182	17,876	17,994	17,990
3′ 3¾″ ..	13,530	13,759	14,165	14,389	14,552	14,671	14,806	14,989	15,078	15,181
2′ 6″ ..	1,436	1,632	1,692	2,171	2,402	2,539	2,683	2,839	2,906	2,926
2′ 0″ ..	432	432	438	452	504	563	615	629	638	638
TOTAL ..	32,099	32,839	33,484	34,656	35,285	35,833	36,286	36,333	36,616	36,735

The decrease in the 5′ 6″ gauge mileage during the year 1917-18 is due to the dismantling of the whole of the Sutlej Valley railway and small portions of the North Western, East Indian, Madras and Southern Mahratta and Oudh and Rohilkhand Railways, the materials of which were required by Government in connection with the prosecution of the war.

New Works.—The total mileage under construction, or sanctioned for construction, at the close of the year was :—

	5′-6″ gauge.	3′-3¾″ gauge.	2′-6″ gauge.	2′-0″ gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State ..	185·00	..	22·00	..	207·00
State lines worked by Companies ..	180·19	117·37	8·43	..	606·20
Branch line Companies' railways under guarantee terms, worked by the Branch line Companies	..	..	27·00	..	27·00
Branch line Companies' railways under guarantee terms, worked by the main line	..	23·30	..	..	23·30
Branch line Companies' railways under rebate terms, worked by the main line.	..	..	92·94	..	92·94
District Board lines	..	68·57	..	..	68·57
Indian State lines worked by Indian States	..	442·20	46·09	56·88	545·17
Indian State lines worked by the main line	..	153·81	98·45	..	252·26
TOTAL ..	665·40	805·25	294·91	56·88	1,822·44

The rate of progress on most of the new lines comprised in this statement was impeded by the difficulties still experienced in obtaining supplies of the essential materials for their construction. The following paragraphs show the position on some of the more important projects.

THE CHIEF RAILWAYS IN INDIA.

The Assam-Bengal Railway, which is constructed on the metre gauge, starts from Chittagong and runs through Surma Valley across the North Cachar Hills into Assam. It is worked under a limited guarantee by a company whose contract is terminable in 1921.

Mileage open	.. ..	1,020·90.
Capital outlay	..	Rs. 18,69,08,000.
Net earnings	..	Rs. 23,90,000.
Earnings per cent.	.. ..	1·29.

Bengal and North-Western.

The Bengal and North-Western Railway was constructed on the metre gauge system by a company without any Government assistance other than free land and was opened to traffic in 1885. The system was begun in 1874 as the Tirhut State Railway. In 1890 this line was leased by Government to the Bengal and North-Western Railway. Since then extensive additions have been made in both sections. It is connected with the Rajputana metre gauge system at Cawnpore and with the Eastern Bengal State Railway at Khatihar and the Oudh and Rohilkhand Railway at Benares.

Mileage open	.. ..	2,063·82.
Capital outlay	..	Rs. 17,72,06,000.
Net earnings	..	Rs. 1,12,24,000.
Earnings per cent.	.. ..	8·03.

Bengal-Nagpur.

The Bengal-Nagpur Railway was commenced as a metre gauge from Nagpur to Chhatisgarh in the Central Provinces in 1887. A company was formed under a guarantee which took over the line, converted it to the broad gauge and extended it to Howrah, Cuttack and Katni. In 1901 a part of the East Coast State Railway from Cuttack to Vizagapatam was transferred to it and in the same year sanction was given for an extension to the coal fields and for a connection with the Branch of the East Indian Railway at Harlharpur.

Mileage open	..	2,746·44.
Capital outlay	..	Rs. 44,91,58,000.
Net earnings	..	Rs. 2,72,61,000.
Earnings per cent.	..	6·10

Bombay Baroda.

The Bombay, Baroda and Central India Railway is one of the original guaranteed railways. It was commenced from Surat *via* Baroda to Ahmedabad, but was subsequently extended to Bombay. The original contract was terminable in 1880, but the period was extended to 1905; and then renewed under revised conditions. In 1885 the Rajputana Malwa metre gauge system of State railways was leased to the Company and has since been incorporated in it. On the opening of the Nagda-Muttra, giving broad gauge connection through Eastern Rajputana with Delhi the working was entrusted to this Company. On the acquisition of the Company in April 1907 the purchase price was fixed at £11,685,581.

Mileage open	.. ..	1,578·17.
Capital outlay	..	Rs. 29,82,75,000.
Net earnings	..	Rs. 2,69,25,000.
Earnings per cent.	.. ..	9·05.

Burma Railways.

The Burma Railway is an isolated line, and although various routes have been surveyed there is little prospect of its being connected with the Railway system of India in the near future. In reply to a question in the Imperial Legislative Council in 1919, Sir Arthur Anderson said —" During 1914-15 extensive survey operations were carried out to ascertain the best alignment for a railway connection along the coast route between Chitagong and certain stations on the Burma Railways south of Mandalay. A rival route via the Hukong Valley between the northern section of the Assam-Bengal Railway and the section of the Burma Railways north of Mandalay was to have been surveyed during the following year but was postponed because of the war. It is now proposed to commence this survey during the coming cold weather, and on its completion, Government will have sufficient information to enable them to decide which route shall be adopted. Thus no arrangements for the construction of a line have yet been made nor has any concession been granted, but it is probable that the line selected will be built at the cost of Government and worked by one or other of the main lines which it will connect." It was commenced as a State Railway and transferred in 1896 to a Company under a guarantee.

Mileage open	.. ..	1,605·83.
Capital outlay	..	Rs 21,51,68,000.
Net earnings	..	Rs. 1,43,17,000.
Earnings per cent.	.. ..	6·65.

Eastern Bengal.

The Eastern Bengal State Railway was promoted under the original form of guarantee and was constructed on the broad gauge. The first portion of the line running to Calcutta over the Ganges was opened in 1862. In 1874 sanction was granted for the construction on the metre gauge of the Northern Bengal State Railway, which ran from the north bank of the Ganges to the foot of the Himalayas on the way to Darjeeling. These two portions of the line were amalgamated in 1884 into one State Railway.

Mileage open	.. ..	621·40.
Capital outlay	..	Rs. 25,77,04,000.
Net earnings	..	Rs. 73,86,000.
Earnings per cent.	.. ..	2·87.

The East Indian.

The East Indian Railway is one of the three railways sanctioned for construction as experimental lines under the old form of guarantee. The first section from Howrah to Pandua was opened in 1854 and at the time of the Mutiny ran as far as Raniganj. It gives the only direct access to the port of Calcutta from Northern India and is consequently fed by all the large railway systems connected with it. In 1880 the Government purchased the line, paying the shareholders by annuities, but leased it again to the company to work under a contract which is terminable in 1919.

Mileage open	.. ..	2,772·36.
Capital outlay	..	Rs. 80,55,41,000.
Net earnings	..	Rs. 7,49,35,000.
Earnings per cent.	.. ..	9·30.

Great Indian Peninsula.

The Great Indian Peninsula Railway is the earliest line undertaken in India. It was promoted by a Company under a guarantee of 5 per cent. and the first section from Bombay to Thana was open for traffic in 1853. Sanction was given for the extension of this line *via* Poona to Raichur, where it connects with the Madras Railway, and to Jubbulpore where it meets the East Indian Railway. The feature of the line is the passage of the Western Ghats, these sections being 15¾ miles on the Bhore Ghat and 9¼ miles on the Thul Ghat which rise 1,131 and 972 feet. In 1900 the contract with the Government terminated and under an arrangement with the Indian Midland Railway that line was amalgamated and leased to a Company to work.

Mileage open	..	3,335.04.
Capital outlay	..	Rs 74,16,14,000.
Net earnings	..	Rs. 5,19,45,000.
Earnings per cent.	..	7.03.

Madras Railway.

The Madras Railway was the third of the original railways constructed as experimental lines under the old form of guarantee. It was projected to run in a north-westerly direction in connection with the Great Indian Peninsula Railway and in a south-westerly direction to Calicut. On the expiry of the contract in 1907 the line was amalgamated with the Southern Mahratta Railway Company, a system on the metre gauge built to meet the famine conditions in the Southern Mahratta Country and released to a large Company called the Madras and Southern Mahratta Railway Company. The mileage is 3,169 01.

Mileage open	..	1 063.11.
Capital outlay	..	Rs. 20,15,48,000.
Net earnings	..	Rs. 1,67,21,000.
Earnings per cent	..	8.30.

The North-Western.

The North-Western State Railway began its existence at the Smd-Punjab-Delhi Railway, which was promoted by a Company under the original form of guarantee and extended to Delhi, Multan and Lahore and from Karachi to Kotri. The interval between Kotri and Multan was unbridged and the railway traffic was exchanged by a ferry service. In 1871-72 sanction was given for the connection of this by the Indus Valley State Railways and at the same time the Punjab Northern State Railway from Lahore towards Peshawar was begun In 1886 the Sind-Punjab-Delhi Railway was acquired by the State and amalgamated with these two railways under the name of the North-Western State Railway. It is the longest railway in India under one administration.

Mileage open	..	5,321.07
Capital outlay	..	Rs. 1,02,25,08,000.
Net earnings	..	Rs. 5,11,05,000.
Earnings per cent	..	5.00

Oudh and Rohilkhand.

Oudh and Rohilkhand Railway was another of the lines constructed under the original form of guarantee. It began from the north bank of the Ganges running through Rohilkhand as far as Saharanpur where it joins the North-Western State Railway. It was not until 1887 that the bridge over the Ganges was completed and connected with the East Indian Railway. To effect a connection between the metre gauge systems to the North and those to the South of the Ganges, a third rail was laid between Bhuriwal and Cawnpore. The Company's contract expired in 1889 when the Railway was purchased by the State and has since been worked as a State Railway.

Mileage open	..	1,621.03.
Capital outlay	..	Rs 22,42,19,000.
Net earnings	..	Rs. 1,41,11,000.
Earnings per cent.	..	6.20.

The South Indian.

The South Indian Railway was one of the original guaranteed railways. It was begun by the Great Southern India Railway Company as a broad gauge line; but was converted after the seventies to the metre gauge. This line has been extended and now serves the whole of the Southern India, south of the south-west line of the Madras Railway. Between Tuticorin and Ceylon a ferry service was formerly maintained, but a new and more direct route to Ceylon *via* Rameshwaram was opened at the beginning of 1914. As the original contract ended in 1907, a new contract was entered upon with the Company on the 1st of January 1908.

Mileage open	..	449.80.
Capital outlay	..	Rs. 7,22,98,000.
Net earnings	..	Rs. 58,19,000.
Earnings per cent.	..	8.05.

The Native States.

The principal Native State Railways are The Nizam's, constructed by a company under a guarantee from the Hyderabad State; the Kathiawar system of railways, constructed by subscriptions, among the several Chiefs in Kathiawar; the Jodhpur-Bikaner Railway, constructed by the Jodhpur and Bikaner Chiefs; the system of railways in the Punjab, constructed by the Patiala, Jind, Maler Kotla, and Kashmir Chiefs; and the railways in Mysore, constructed by the Mysore State.

INDIA AND CEYLON.

The possibility of connecting India and Ceylon by a railway across the bank of sand extending the whole way from Rameswaram to Mannar has been reported on from time to time, since 1895 various schemes having been suggested.

The South Indian Railway having been extended to Dhanushkodi, the southernmost point of Rameswaram Island, and the Ceylon Government Railway to Talaimannar, on Mannar Island, two points distant from each other

about 21 miles across a narrow and shallow strait, the project has again been investigated with the idea of connecting these two terminal stations by a railway constructed on a solid embankment raised on the sand bank known as "Adam's Bridge", to supersede the ferry steamer service which has been established between these two points.

In 1913, a detailed survey was made by the South Indian Railway Company, and a project has now been prepared. This project contemplates the construction of a causeway from Dhanushkodi Point on the Indian side to Talaimannar Point on the Ceylon side, a length of 20.05 miles of which 7.19 will be upon the dry land of the various lands, and 12.86 will be in water. The sections on dry land will consist of low banks of sand pitched with coral and present no difficulty. The section through the sea will be carried on a causeway which it is proposed to construct in the following way. A double row of reinforced concrete piles, pitched at 10 feet centres and having their inner faces 14 feet apart, will first be driven into the sand. These piles will then be braced together longitudinally with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles slabs of reinforced concrete will be slipped into position, the bottom slabs being sunk well into the sand of the sea bottom. Lastly, the space enclosed by the slabs will be filled in with sand.

The top of the concrete work will be carried to six feet above high water level, and the rails will be laid at that level. The sinking of the piles and slabs will be done by means of water jets. This causeway, it is expected, will cause the suspended sand brought up by the currents, to settle on either side bringing about rapid accretion and eventually making one big island of Rameswaram island and Mannar island.

If this method of construction is adopted, it is estimated that the total cost of the causeway and works at the two terminal points, *viz*:— Dhanushkodi and Talaimannar will be approximately 111 lakhs.

Indo-Burma Connection.

The raids of the Emden in the Bay of Bengal in 1914, and the temporary interruption of communications between India and Burma, stimulated the demand for a direct railway connection between India and Burma. Government accepted the position and appointed Mr. Richards, M. Inst. C.E., to be the engineer-in-charge of the surveys to determine the best route for a railway from India to Burma. The coast route appears to be the favoured one. This would start from Chittagong, which is the terminus and head-quarters of the Assam-Bengal Railway and a seaport for the produce of Assam. The route runs southwards through the Chittagong district, a land of fertile rice fields intersected by big rivers and tidal creeks and it crosses the Indo-Burma frontier, 94 miles from the town of Chittagong. For about 160 miles further it chiefly runs through the fertile rice lands of Arrakan and crosses all the big tidal rivers of the Akyab delta. These include the Kalidan river which drains 4,700 miles of country and even at a distance of about 30 miles from its mouth is more than half a mile wide. About 260 miles from Chittagong the railway would run into the region of mangrove swamps which fringe the seacoast north and south of the harbour of Kaukkphu stretching out into the mangrove swamps like ribs from the backbone. Innumerable spurs of the Arrakan Yoma have to be crossed. Yoma is a mountain ridge which extends from Cape Negrais northwards until it loses itself in a mass of tangled hills east of Akyab and Chittagong. At its southern end the height of the ridge is insignificant but it has peaks as high as 4,000 feet before it reaches the altitude of Sandway and further north it rises much higher. It is a formidable obstacle to railway communication between India and Burma This route is estimated to cost about £7,000,000 and would have to be supplemented by branch lines to Akyab where there is at present a considerable rice traffic and the cost of this would have to be added to the £7,000,000 already referred to.

The other routes examined have been the Hukong Valley route and the Manipur route which were surveyed by the late Mr. R. A. Way many years ago. The Manipur route is estimated to cost about £5,000,000 as it has to cross three main ranges of hills with summit levels of 2,650, 3,600 and 8,900 feet long. Altogether there would be about four miles of tunnelling through the three main ridges and through other hills and more than 100 miles of expensive undulating railway with grades as steep as 1 in 50 and 11,000 feet of aggregate rise and fall. The Hukong valley route seems to be the cheapest one as it is estimated to cost £3,500,000. This line is only about 284 miles long and it presents fewer engineering difficulties than either the Coast or the Manipur route. One hundred and fifty miles of this route lie in open country capable of cultivation though at present it is only very thinly populated. Only one range of hills has to be crossed and this can be negotiated with a summit tunnel of 5,000 feet long at a height of 2,500 feet. There are less than fifty miles of very heavy work and only about 4,500 ft. aggregate of rise and fall.

It is understood that the construction of this line will constitute one of the first charges on the Railway Budget when normal conditions are restored.

INDIAN RAILWAYS COMMITTEE, 1920-21.

The Report has been published of the Committee appointed by the Secretary of State for India to inquire into the administration and working of the Indian railways. The Chairman of the Committee was Sir William M. Acworth, and the nine members were :—

Sir Henry P. Burt, late President of the Indian Railway Board, Chairman of the Bengal and North Western and Rohilkund & Kumaon Railway Companies.

Sir Rajendra Nath Mookerjee, of Calcutta.

Sir Arthur R. Anderson, late President, Indian Railway Board.

Sir George C. Godfrey, Agent, Bengal-Nagpur Railway Company.
The Hon. Mr. V. S. S. Sastri, Member of the Indian Council of State.

Mr. E. H. Hiley, formerly of the Great Northern and North Eastern Railways, and late General Manager of the New Zealand Government Railways.
Sir Henry Ledgard, of Cawnpore
Mr. Purshotamdas Thakurdas of Bombay, and
Mr. James Tuke, Director of Barclay's Bank and The British Linen Bank.
The Secretary to the Committee was Mr. T. Ryan, C.I.E., of the Indian Finance Department, and Mr. E. R. Pole, of the Chief Accountant's Department, Great Western Railways, acted as Assistant Secretary.

Origin of the Inquiry:—The appointment of the present Committee was the outcome of deliberations on the future of the East Indian Railways, a line managed by a company whose contract was terminable in 1919. During the past decade a demand by Indian politicians for the more complete nationalisation of the Indian railways has become increasingly vocal; protests have been frequent against the existing form of management of the State lines by non-resident companies holding only a relatively small pecuniary interest in the properties which they managed, and influenced, or believed by a large section of the Indian public to be influenced, mainly or solely by solicitude for their own dividends, and only in a secondary degree, or not at all, interested otherwise in the good of Indian trade or the comfort of the travelling Indian public.

The departmental discussions of the East Indian Railway case, in this atmosphere, led to the decision that, though the existing working arrangement should be continued (with a modification of the profit-sharing terms) until the end of 1924, the direction of the line should thereafter be transferred to India—either to direct State or to company management. It was decided at the same time that opportunity should be taken in the intermediate period to conduct a detailed investigation into the various questions that had arisen. The scope of the proposed inquiry was enlarged, with the result that the following terms of reference were eventually laid down:—

(1) To consider, as regards railways owned by the State, the relative advantages financial and administrative, in the special circumstances of India, of the following methods of management:—
(*a*) Direct State management;
(*b*) Management through a company domiciled in England and with a board sitting in London;
(*c*) Management through a company domiciled in India and with a board sitting in India;
(*d*) Management through a combination of (*b*) and (*c*);
And advise as to the policy to be adopted at and when the existing contracts with the several railway companies can be determined. (In considering the question of the East Indian Railway the Committee will take note of the decision to remove the management of that railway to India, which was arrived at when the contract with the present company was extended on the amended terms in 1919.)

(2) To examine the functions, status and constitution of the Railway Board and the system of control exercised by the Government of India over the railway administration, and to recommend such modifications, if any, as are necessary for the adequate disposal of the railway business of the Government.

(3) To consider arrangements for the financing of railways in India, and in particular the feasibility of the greater utilisation of private enterprise and capital in the construction of new lines.

(4) To report whether the present system of control by Government of rates and fares and the machinery for deciding disputes between railways and traders are satisfactory, and if not, to advise what modifications are desirable.

(5) To make recommendations that may seem germane to the inquiry.

A letter from the India Office to the Committee made it clear that attention need not be limited rigidly to the railways owned by the State, and that the expression "Government of India" was not to be interpreted in a restricted local sense.

The Report: The Report is a document of 90 pages and contains references to three considerable volumes of evidence and written statements. There exists also a fifth volume of confidential evidence, which will not be published, and the contents of which, we understand, are relatively brief. The Report is a self-contained document signed by all the members, and is accompanied by only one short reservation; but perusal shows that this appearance of unanimity is somewhat artificial. A large measure of agreement was attained: the Committee are at one in their comments on the existing state of affairs, in their proposals for a radical reconstitution of the Government administrative machinery and methods of control, in their observations on the relations between the public and the railways serving them, and in their comments and suggestions on certain other matters cognate to their inquiry. But they have not seen eye to eye on one of the most important of the major questions referred to them. On the question of management they are only unanimous—and even here are not all influenced by quite the same considerations—to the extent of holding that the time has come when the existing system of management through companies domiciled in Great Britain should be brought to an end according as the several contracts permit; but they are sharply divided as to the policy to be adopted for future railway management in India, and their views as to how capital should be obtained in future necessarily show a corresponding divergence.

The division is practically equal; for the technical majority which condemns company management, lock, stock and barrel, as a possible system of dealing with the State-owned railways in the special conditions of India, and which favours direct State management as the only practical alternative, consists of the Chairman (Sir W. M. Acworth) with only four members. The minority, consisting of the other five members of the Committee, evinces a decided leaning towards management by companies—but by companies domiciled and

having their headquarters in India, unlike those now in existence—and advocates the adoption of this policy in the case of the East Indian Railway when a change has to be made in 1924, and possibly in the case of the Great Indian Peninsula Railway, whose contract is terminable in 1925; this party on the committee would leave the other railways to be dealt with on their merits when their existing working contracts can be determined—at various dates ranging from 1928 in the case of the Burma Railways to 1950 in that of the Bengal-Nagpur Railway.

The occufrence of this division of opinion has led the Committee to arrange their report in the order indicated in the preceding outline, the opposing views taken on the subject of management and the associated question how capital monies required in future should be obtained being set forth in separate sections towards the end of the Report. In the following summary we follow much the same order of presentation.

Summary of Report.—The opening chapter of the Report is a formal introduction followed by the quotation of correspondence with the Government arising from the suggestion by the Bengal Chamber of Commerce that an *ad interim* report should be issued dealing specially with the methods of raising additional capital urgently required to bring the railways up to a proper standard. The reply to that suggestion showed that the Committee felt that this question involved their whole reference, and that though agreeing with the Chamber as to the urgent need for large capital outlay they did not see their way to anticipate their report in which the whole subject would be dealt with from the point of view of permanent policy.

The committee proceed, by extensive quotations from evidence, to show that the entire railway system is physically inadequate. Congestion, they say, has become normal and there is urgent need of drastic measures of reform and reconstruction. The complaints made date from before the war period, though they were naturally intensified by the conditions of recent years. It is held that the defects criticised are due primarily to the failure of Government to provide adequate funds both for capital and for renewals. The existing financial system is described as a paralysing one, unsuited to the needs of a great commercial enterprise. Stress is laid on the fact that the Government of India's railway investment has been directly profitable as well as being further profitable indirectly through the benefit to the country. It is shown that it would have paid the Government to have provided capital freely, whereas it has neither allowed the companies to increase their share capital, nor itself made a sufficient provision of funds.

Financial Importance.—The subordinate position of the railway administration is shown not to be in accord with its financial importance. The Member of Council in charge is also responsible for two other departments which make great demands upon his attention, and with his present multifarious duties he cannot attend to the railways. The Railway Board is in the position of a stepchild; it is overloaded with routine and trammelled by unnecessary restrictions, while it has not been empowered to exercise necessary authority in matters of policy. The Board's existing organisation is such that it cannot possess the necessary local knowledge; it is consequently ineffective and does not enjoy public confidence. Engineering inspection is overdone, there being seven inspection "circles," in each of which an inspecting officer has to inspect every mile of railway annually; while on the other hand there is no provision for the local supervision of traffic operation and for supervising the relations between the railways and the public. The forms of accounts and statistics are out of date, the statistics being extremely voluminous but of little practical use. It is suggested that in making appointments and promotions undue regard is had to the relative seniority of the officers concerned.

Railways and Public.—The relations of the railways with the public are unsatisfactory, and greater control of rates and fares is necessary. The public have no means of redress in cases of differences with railway authorities; appeals to the Railway Board are dealt with perfunctorily, often indeed being referred back for disposal to the very railways against which complaints are made; and the provisions of the Indian Railways Act for the appointment of special Commissions to deal with particular classes of complaint are so cumbrous and inapt that they have never once been carried into practice during the 32 years that the Act has been in force. There is a strong demand for a more accessible court of appeal, and the Committee believe that its creation would prevent much misunderstanding and ill-feeling.

Serious delays occur in settling claims, while irregularities in connection with the provision of wagons for the transport of goods have grown from the practice of petty gratuities, of the nature of tips, to "a system of organised blackmail." The Committee consider that neither the local nor central railway authorities have taken this matter up with sufficient vigour. They do not accept the excuses made for the continuance of the practice, it is admittedly difficult to prove and punish in particular cases, but they hold that the remedy lies in prevention, and that this would not be impossible if all concerned were sufficiently in earnest. The Committee lay stress also upon the grievances of the third-class passengers, especially in regard to the extraordinary overcrowding which is common on the railways. They admit that until funds can be supplied in quantity sufficient very greatly to increase facilities their complaints cannot be removed, but they think that some improvements could be secured by greater efforts of foresight and supervision without heavy cost being involved.

Department of Communications.—These criticisms are the principal ones leading up to the following specific recommendations:—

There should be created a Department of Communications responsible for railways, ports, inland navigation, road transport (so far as it is dealt with by the Central Government), and posts and telegraphs. The Member of Council in charge must be an experienced administrator, but need not himself be a technical expert. The Railway Board should be replaced by a

Railway Commission, consisting of a technical Chief Commissioner responsible to the Member of Council for Communications and four other Commissioners, one of whom should be second in command to the Chief Commissioner at headquarters, and in charge of finance, statistics, establishments and the headquarters secretariat. The three remaining Commissioners should be in charge respectively of Western, Eastern and Southern geographical divisions They would normally be engaged at headquarters, but should devote a substantial portion of their time to personal visits to their divisions. It is considered that by this limitation of responsibility each Commissioner would acquire a more intimate local knowledge, connoting the ability to deal authoritatively with difficulties and to redress grievances, than is possible to the Railway Board as at present constituted. The technical staff at headquarters should be strengthened, especially on the traffic side, and should comprise six directors in charge, respectively of accounts, civil engineering, mechanical engineering, traffic (operating), traffic (commercial), and posts with inland navigation and road transport.

Railway Budget Separated.—The Finance Department of the Government of India should cease to control the internal finance of the railways. The railway budget should be separate from the general budget, and be presented to the Legislative Assembly (the new body in India which corresponds more or less to the House of Commons) by the Member in charge of Communications. The Railway Department should be responsible for earning and expending its own income and for providing such net revenue as may be required to meet interest on the Government's railway debt. Subject to independent audit by the Government of India, the Railway Department should employ its own audit and accounting staff (the Government audit and accounts officers are at present responsible to the Finance and not to the Railway Department). The present forms of accounts and statistics should be thoroughly overhauled with expert assistance

The reconstituted Railway Department should be relieved from control by the India Office and the Government of India, except on large questions of finance and general policy. It should delegate increased powers of day to day management to local railway administrations, but, on the other hand, should exercise greater authority than at present in matters such as the initiation and enforcement of reforms, and ought to have some control over the appointments of the principal officers on company worked lines The number of engineering inspectors should be reduced to three, and three new inspectors of traffic should be appointed, one for each territorial division. To give the Indian public the necessary voice in railway management Central and Local Advisory Councils are proposed; the former to be under the chairmanship of the member for Communications, and not to consist of more than 25 members, of whom three or four should represent the departments of Government concerned with railway matters, and eight or nine should be nominated by the principal trade and industrial associations. A similar number of members should represent agricultural interests and the travelling public; these might be nominated by the provincial legislative councils. The Local Advisory Councils should be of about half the size of the Central Council and should be similar in constitution, but would have the local railway Agents as chairmen.

Rates Tribunal.—A rates tribunal, with an experienced lawyer chairman and one railway and one commercial member, should be established, with jurisdiction over all questions of the reasonableness of rates and facilities. This body should investigate the conditions attached to owner's and railway risk notes, and should frame standard forms. In certain circumstances an appeal against decisions of the rates tribunal should lie to the Governor-General in Council. Delays in settling claims must be reduced, and this can be ensured by the improved supervisory machinery now recommended. The utmost possible efforts must be made to stamp out the serious and widespread abuses connected with the allocation of goods wagons. The treatment of lower-class passengers requires special attention and supervision. Some alleviation of conditions can be effected, pending improvement of facilities by additional expenditure

A reasonable general increase should be made in rates and fares, and the existing surtaxes on goods traffic should be withdrawn. Greater facilities are necessary for training Indians for the higher railway posts, and the process of their employment should be accelerated.

Branch lines of railway should, as far as possible, be constructed and worked by the main lines

When financial conditions again permit of railway development, the native Indian States should be called into council and be invited to take part in working out a common scheme of development

The Department of Communications should inquire into the allegation of unfair competition with inland waterways, a matter which has attracted some attention, particularly in Madras.

The Committee recommend an investigation by an expert commission of the gauge question, Sir Henry Burt, however, dissents from this holding that such an investigation at this stage would furnish a new reason for postponing expenditure which all agree is urgently necessary to meet present requirements. He considers that the question of gauge is one which must be considered separately in relation to any new railway project and not as a general issue.

The Committee agree that management by companies of English domicile should not be continued after the existing guaranteed companies' contracts can be terminated, and that these companies should not be allowed further to increase their share capital. No steps should be taken for establishing a system of combined companies with English and Indian domicile.

Nationalisation.—Dealing further with the question of management, in a separate section of the Report, the majority, comprising the Chairman, Mr. Sastri, Mr. Hiley, Mr. Purshotamdas Thakurdas and Mr. Tuke,

made it clear that in addition to the reasons for which the entire Committee advocate the abandonment of the English guaranteed company system—the broad ground, that is, that it does not correspond with modern Indian conditions—these five go further and hold that the system has never worked, and cannot be made to work, satisfactorily, in relation to the State owned railways of India. They observe that no one has suggested that the State-owned lines should be disposed of out and out to companies —a suggestion that, in any event, would find no acceptance; they do not believe that, as a matter of practical politics, companies substantially independent could be formed in India to work the State owned lines, and they urge that without substantial independence the advantages claimed for private enterprise cannot be secured. To speak of the advantages ordinarily associated with private management in the conditions which must obtain is, in their judgment, "to be misled by a mere name." The majority recommend, therefore, that, according as the companies' contracts fall in, the undertakings should be managed directly by the State. It follows that all future capital must be raised directly by Government, and it is held that there is no reason why this should not be done to the extent necessary if Government will deal with the matter on business-like principles. Money required to put the existing railways into proper condition should be raised, even at to-day's price, as fast as it can be economically spent, but the immediate raising of capital for extensions is not recommended. This part of the Committee consider that Government borrowing should be effected by ordinary sterling loans in England and by rupee loans earmarked for railway purposes in India. Finally, they recommend that a systematic organisation should be established to familiarise Indians, mainly through Indian agencies, with the idea of subscribing to Government loans, specially to encourage the masses of the people who have not hitherto been accustomed to investment.

Company Management.—In another section of the Report the minority, consisting of Sir H. P. Burt, Sir R. N. Mookerjee, Sir A. R. Anderson, Sir G. Godfrey and Sir H. Ledgard, traverse the special objections alleged against the company system. They defend the existing companies from the attack of the majority, though admitting that future company management should be located in India. They recommend a continuance of both State and company management, with a decided leaning in favour of the latter where possible, and they deprecate the adoption of a policy of State management only. They propose a scheme for creating Indian domiciled companies to manage the East Indian and possibly the Great Indian Peninsula Railway, the cases of other lines to be considered on their merits later on, when the contracts become terminable. They agree that much capital must be raised direct by the Government of India, but advocate also the use of Indian domiciled companies, such as they propose, to provide additional funds. They press that no channel through which money can be obtained ought to be neglected, and suggest, for instance, that further debenture loans through the existing companies might be negotiated. They agree that money should be raised as fast as it can be economically spent, but do not wish new development to be arrested, and consider that private enterprise should be enlisted to provide capital for extensions. In their opinion Government borrowings, both in England and India, should be advertised as for railway purposes. They recommend enlisting the assistance of all banks when money is required, and that independent offers of loans on special conditions should be considered.

The Committee unanimously endorse the recommendations of the Mackay Committee of 1907, that in periods of easy money funds should be raised in excess of immediate requirements, and both parties are agreed that the Oudh and Rohilkhand Railway might advantageously be merged in the East Indian Railway system.

Main results of working of all Indian Railways treated as one system.

—	Particulars.		1911.	1912.	1913-14.	1914-15.	1915-16	1916-17.	1917-18.	1918-19.	1919-20.
1	Mileage open at close of the year	Miles	32,839	33,484	34,652	35,285	35,833	36,286	36,334	36,616	36,735
2	Total Capital outlay, including ferries and suspense, on open lines (in thousands of rupees) ..	Rs.	4,50,06,80	4,65,15,00	4,95,08,64	5,19,22,13	5,29,98,29	5,35,27,97	5,41,79,90	5,49,74,45	5,66,37,77
3	Gross earnings (in thousands of rupees)	,,	55,27,92	61,65,07	63,58,56	60,42,01	64,66,04	70,68,42	77,36,39	86,28,68	89.15,32
4	Gross earnings per mile open ..	,,	16,833	18,412	18,350	17,123	18,041	19,480	21,292	23,565	24,269
5	Gross earnings per mile open per week	,,	324	354	353	329	347	375	409	453	467
6	Gross earnings per train-mile ..	,,	3·87	4·04	4·07	3·84	4·07	4·32	4·93	5·44	5·50
7	Total working expenses (in thousands of rupees)..	,,	28,83,92	30,15,92	32,93,04	32,74,10	32,91,95	33,40,32	35,36,87	41,80,17	50,65,65
8	Working expenses per mile open .	,,	8,782	9,007	9,504	92,79	9,185	9,206	9,734	11,416	13,789
9	Working expenses per train-mile..	,,	2·02	1·98	2·11	2·08	2·07	2·04	2·25	2·64	3·13
10	Percentage of working expenses to gross earnings ..	Per cent.	52·17	48·92	51·79	54·19	50·91	47·26	45·72	48·45	56·81
11	Net earnings (in thousands of rupees)	Rs.	26,44,00	31,49,15	30,65,52	27,67,91	31,74,09	37,28,10	41,99,52	44,48,51	38,49,67
12	Net earnings per mile open ..	,,	8,051	9,405	8,846	7,844	8,856	10,274	11,558	12,149	10,480
13	Net earnings per train-mile ..	,,	1·85	2·06	1·96	1·76	2·00	2·28	2·68	2·80	2,37
14	Percentage of net earnings on total capital outlay (item 2)...	Per cent.	5·87	6·77	6·19	5·33	5·99	6·96	7·75	8·09	6·80
15	Coaching train-miles (in thousands)	Train-miles	50,833	52,093	55,972	58,569	56,364	55,719	44,407	44,117	52·092

Main results of working of all Indian Railways treated as one system—*contd.*

	Particulars.		1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
16	Goods train-miles (in thousands)	Train-Miles	53,219	59,992	57,933	56,359	62,766	68,083	72,528	74,283	70,061
17	Mixed train-miles (in thousands)..	„	33,746	34,940	34,581	35,514	34,471	34,874	34,618	34,240	34,169
18	Total, including miscellaneous train-miles (in thousands) ..	„	142,944	152,761	156,276	157,142	159,038	163,604	157,036	158,588	162,161
19	Unit-mileage of passengers (in thousands)	Unit-miles	14,372,943	15,318,872	16,614,088	16,022,849	16,528,646	17,846,064	16,204,392	18,039,577	20,614,612
20	Freight ton-mileage of goods (in thousands)	Ton-miles	13,358,264	15,628,595	15,623,235	15,225,957	17,157,841	19,825,901	21,015,126	22,140,806	20,401,656
21	Average miles a ton of goods was carried	Miles	187·44	199·15	189·11	188·04	207·98	230·08	245·87	242·88	232,33
22	Average rate charged for carrying a ton of goods one mile ..	Pies	4·73	4·66	4·64	4·43	4·34	4·01	4·08	4·26	4·43
	Average miles a passenger was carried.										
23	1st class	Miles	111·60	106·54	112·46	123·88	113·18	126·60	124·99	133·83	139·16
24	2nd class	„	76·33	74·77	74·58	80·04	93·44	106·88	96·58	90·64	85·63
25	Intermediate class..	„	57·27	51·90	51·13	49·72	50·20	52·17	71·54	75·37	75 85
26	3rd class	„	37·72	37·81	37·40	36·59	36·60	37·56	38·91	40·68	40·73
27	Season and Vendors' tickets ..	„	8·78	8·64	8·71	8·50	8·52	8·46	8·54	8·81	9·18
28	Total	„	36·87	36·72	36·30	35·52	35·59	36·82	37·66	39·24	39·64
	Average rate charged per passenger per mile.										
29	1st class	Pies	14·29	14·25	14·48	12·79	13·68	13·32	16·58	15·28	16·04
30	2nd class	„	6·73	6·64	6·60	6·23	5·50	5·07	6·76	7·15	7·59
31	Intermediate class..	„	3·10	3·12	3·14	3·16	3·16	3·14	4·02	4·17	4·21
32	3rd class	„	2·30	2·30	2·29	2·29	2·29	2·32	2·78	2·86	2·84
33	Season and Vendors' tickets ..	„	1·43	1·45	1·42	1·42	1·42	1·43	1·50	1·49	1·54
34	Total	„	2·47	2·45	2·45	2·44	2·44	2·48	2·99	3·08	3·09

§ Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1910.	1911.	1912.	1913-14.	1914 15.	1915-16.	1916-17.	1917-18.	1918 19.	1919-20.
STATE LINES.										
Aden	..	..	..	..	..	..	..	..	..	29
Agra Delhi Chord*	126	126	126	126	126	126	126	126	126	126
Alnavar Dandeli (Provincial)	..	..	..	..	..	..	..	..	19	19
Assam-Bengal*	790	790	805	812	848	808	823	869	869	869
Bangalore-Harihar	..	..	..	..	..	..	..	..	..	210†
Baran-Kotah*	40	40	40	40	40	40	40	40	40	40
Bengal-Nagpur*	1,808	1,852	1,852	1,877	1,877	1,889	1,889	1,889	1,889	1.889
Bezwada Extension*	21	21	21	21	21	21	21	21	21	21
Bhopal-Itarsi* (British Section)	13	12	12	12	12	12	12	13	13	13
Bombay, Baroda & Central India*	504	504	2,762	2,812	2,812	2,818	2,818	2,818	2,819	2.819
Broach-Jambusar *	..	..	..	..	30	30	30	30	30	30
Burma*	1,527	1,527	1,529	1,529	1,529	1,529	1,529	1,529	1,535	1.536
Cawnpore-Banda *	..	..	..	33	76	76	76	76	76	76
Cawnpore-Burhwal	80	80	80	80	80	80	80	80	80	80
Dhone-Kurnool*	32	32	32	32	32	32	32	32	32	32
East Indian*	2,213	2,266	2,331	2,424	2,446	2,448	2,495	2,464	2,459	2.461
Eastern Bengal	1,508	1,510	1,570	1.581	1,639	1,639	1,628	1,582	1,581	1,633
Gondia-Chanda*	183	181	181	216	216	217	217	217	217	217
Great Indian Peninsula*	1,606	2,420	2,419	2,484	2,500	2,554	2,552	2,553	2,562	2.562
Indian Midland*	813	‡	‡	‡	‡	‡	‡	‡	..	..
Jakhal-Hissar *	..	..	..	51	50	50	..	..	..	..
Jodhpur-Hyderabad*(British Section)	124	124	124	124	124	124	124	124	124	124
Jorhat Provincial State	30	32	32	32	32	32	32	32	32	32
Jubbulpore-Gondia* Extension	275	275	276	311	312	312	312	312	312	312
Kalka-Simla	60	60	60	60	60	60	60	60	60	60
Kohat-Thal	62	62	62	62	62	62	62	62	62	62
Lucknow-Bareilly*	237	258	296	298	313	313	313	312	312	312
Madras and Southern Mahratta*	2,553	2,553	2,553	2,553	2,552	2,568	2,567	2,550	2,550	2,550
Morappur-Hosur *	19	19	19	74	74	74	73	73	73	73
Mysore Section of Madras & Southern Mahratta Railway.*	296	296	296	296	296	296	296	296	296	(a)
Nagda-Muttra*	339	339	..	..	..	..	..	..	..	..
Nagpur Chhindwara*	..	51	51	98	94	94	97	97	97	97

* Worked by a Company. ‡ Worked by Great Indian Peninsula Railway.

§ These are the latest figures published in 1920. † Formerly worked as part of the Mysore Section of M. & S. M. Railway.

(a) Split up into two railways, *viz.* (1) Bangalore-Harihar Railway, and (2) Mysore-Bangalore Railway, figures of which have been shown separately.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
STATE LINES—*contd.*										
Nilgiri*	29	29	29	29	29	29	29	29	29	29
North-Western	3,570	3,656	3,650	3,710	3,709	3,758	3,761	3,690	3,805	3,785
Nowshera-Durgai	40	40	40	40	40	40	40	40	40	40
Oudh and Rohilkhand	1,327	1,434	1,524	1,525	1,526	1,527	1,527	1,512	1,512	1,512
Palanpur-Deesa*	17	17	17	17	17	17	17	17	17	17
Purulia-Ranchi*	73	73	73	115	115	115	115	115	115	115
Ralpur-Dhamtari *	57	57	57	57	57	57	57	57	57	57
Rajputana-Malwa*	1,778	1,778	†	†	†	†	†	..	..	..
South Indian*	1,323	1,323	1,323	1,326	1,327	1,327	1,327	1,327	1,327	1,327
Southern Shan States	..	..	16	23	70	70	70	70	70	70
Tinnevelly-Quilon* (Travancore) British section	50	50	50	50	50	50	50	50	50	50
Tirhoot*	776	769	792	788	788	826	812	804	819	815
Tirupattur-Krishnagiri*	25	25	25	25	25	25	25	25	25	25
Trans Indus (Kalabagh-Bannu) *	..	..	..	89	89	89	135	135	135	135
Tumsar-Tirodi Light *	..	..	..	..	..	..	51	51	46	46
ASSISTED COMPANIES.										
Ahmedabad-Dholka	33	33	33	34	34	34	34	34	34	34
Ahmedabad-Parantij	55	89	89	89	89	89	89	89	89	89
Ahmadpur-Katwa	..	..	..	..	..	..	..	32	32	32
Amritsar-Patti	54	54	54	54	54	54	54	54	54	54
Arakan Light	..	..	..	..	..	..	..	..	18	18
Arrah-Sasaram Light	..	61	61	60	65	65	65	65	65	65
Bankura-Damoodar River	..	..	..	..	..	..	43	60	60	60
Baraset-Basirhat Light	51	51	51	51	52	52	52	52	52	52
Barsi Light	79	116	116	116	116	117	117	117	117	117
Bengal and North Western	1,117	1,176	1,177	1,240	1,239	1,241	1,241	1,241	1,243	1,249
Bengal Dooars	153	153	153	153	153	153	153	153	158	158
Bezwada-Masulipatam *	52	52	52	52	52	52	52	52	52	52
Bowringpet-Kolar	..	..	..	11	(a)	(a)	(a)	(a)	(a)	(a)
Bukhtiarpur-Behar Light	28	33	33	33	33	33	33	33	33	33

* Worked by a Company.
‡ These are the latest figures published in 1920.
† Amalgamated with Bombay, Baroda and Central India Railway.
(*a*) Shown under Indian State lines against Kolar District Railway.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
ASSISTED COMPANIES—*contd.*										
Burdwan Katwa	..	..	..	..	..	33	33	33	33	32
Champaner-Shivrajpur Pani Light	..	20	20	20	26	25	32	32	32	32
Chaparmukh-Silghat	..	..	..	..	..	..	..	..	..	51
Darjeeling-Himalayan	51	51	51	51	51	51	51	51	51	51
,, Extension	..	..	..	14	54	95	95	95	95	95
Dasghara-Jamalpurgunj	..	..	..	..	..	..	..	8	8	8
Delhi-Umballa-Kalka	192	192	192	192	192	192	206	206	206	206
Dehri-Rohtas Light	..	..	..	..	24	24	24	24	24	24
Deoghur	5	†	†	†	†	†	†	†	†	†
Dhond-Baramati*	..	..	..	..	27	27	27	27	27	27
Dibru-Sadiya	86	86	86	86	86	86	86	86	86	86
Ellichpur-Yeotmal*	..	..	..	48	67	117	118	118	118	118
Godhra-Lunavada	..	..	..	24	25	25	25	25	25	25
Hardwar-Dehra	32	32	32	32	32	32	32	32	32	32
Howrah-Amta Light	44	44	44	44	44	44	44	44	44	44
Howrah-Sheakhala Light	20	20	20	20	20	20	20	20	20	20
Jacobabad-Kashmor*	..	..	..	..	77	77	77	77	77	77
Jessore-Jhenidah	..	..	..	37	37	37	37	37	37	37
Jullundar Doab	..	..	28	103	133	130	130	130	130	130
Jullundur-Mukerian *	..	..	..	..	45	45	45	45	45	45
Kalighat Falta	..	..	..	..	..	..	..	25	25	25
Khulna Bagerhat	..	..	..	..	..	..	..	..	20	20
Mandra-Bhaun *	..	..	..	..	..	46	46	46	46	46
Matheran Light *	13	13	13	13	13	13	13	13	13	13
Mirpur Khas-Jhudo	50	50	50	50	50	50	50	50	50	50
Mirpur Khas-Khadro *	..	..	50	50	50	50	50	50	50	50
Mymensing-Bhairab Bazar	..	..	..	..	..	..	31	88	101	101
Mymensingh-Jamalpur-Jagannathganj	55	55	55	55	55	54	56	56	56	(*b*)
Nadiad-Kapadvanj	..	..	..	28	28	28	28	28	28	28
Pachora-Jamner	..	..	..	..	..	..	..	..	35	35
Panposh-Raipura	..	..	..	..	..	..	..	..	..	14
Phagwara-Rahon *	..	..	..	..	..	26	26	45	45	45
Podanur Pollachi *	..	..	..	..	..	25	25	25	25	25
Powayen Light	40	40	40	40	40	40	39	39	(*a*)	(*a*)

* Worked by a Company. † Amalgamated with East Indian Railway. (*a*) Temporarily dismantled.
‡ These are the latest figures published in 1920. (*b*) Incorporated with the Eastern Bengal Railway from 1st January 1920.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1910.	1911.	1912.	1913-14	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
ASSISTED COMPANIES—*concld.*										
Pulgaon-Arvi	..	..	..	..	..	..	..	22	22	22
Rohilkhand and Kumaon	202	225	256	256	256	259	259	259	259	259
Sara-Sirajganj *	..	..	..	..	..	22	53	53	53	53
Shahdara (Delhi) Saharanpur Light	93	93	93	93	93	93	93	93	93	93
Sialkot Narowal *	..	..	..	..	..	38	38	38	38	38
South Behar	79	79	79	79	79	79	79	79	79	79
Southern Punjab	576	576	576	576	576	576	577	578	578	578
Suramangalam-Salem	..	..	..	..	..	..	..	4	4	4
Sutlej Valley	209	209	209	208	208	208	208	..	..	..
Tanjore District Board*	103	103	103	103	112	112	112	112	112	135
Tapti Valley	155	155	155	155	155	155	156	156	156	156
Tarkessur	22	22	22	22	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
Tenali-Repalli *	..	..	..	..	..	..	21	21	21	21
Tezpur-Balipara	20	20	20	20	20	20	20	20	20	20
UNASSISTED COMPANIES.										
Ambaji-Taranga Light	..	..	..	..	..	..	..	..	..	21
Bengal Provincial	33	33	33	33	33	33	33	33	33	33
Dehri-Rohtas Light	..	24	24	24	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Jagadhri Light	..	3	3	3	3	3	3	3	3	3
Kulasekarpatnam Light	..	..	..	..	..	18	18	18	32	32
Ledo and Tikak Margherita Colliery	6	6	6	6	6	6	6	6	6	5
Madaya Light	..	..	8	8	8	8	8	16	16	16
Total	39	66	74	74	50	68	68	76	90	110
INDIAN STATE LINES										
Bangalore-Chik Ballapur Light	..	..	..	..	15	29	35	39	39	39
Bhavnagar-Gondal-Junagad-Porbandar	374	..	..	..	..	..	..	..	..	..
Bhavnagar	..	158	173	206	206	206	206	206	206	206
Bhopal-Itarsi* (Indian State Section)	44	44	44	45	45	45	44	45	45	45

* Worked by a Company.
‡ These are the latest figures published in 1920.

(*a*) Incorporated with the East Indian Railway on the 1st January 1915.
(*b*) Shown under Assisted Companies.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
INDIAN STATE LINES—*contd.*										
Bhopal-Ujjain*	113	113	113	113	113	113	113	113	113	113
Bikaner	..	..	..	470	470	498	498	498	498	498
Bilimora-Kalamba *	..	..	..	..	26	26	26	35	35	35
Bina-Goona-Baran*	146	146	146	146	146	146	146	147	147	147
Birur-Shimoga*	38	38	38	38	38	38	38	38	38	38
Bodeli-Chota Udaipur	..	..	..	..	..	..	..	23	23	23
Cooch-Behar	33	33	33	33	33	33	33	33	33	33
Cutch	37	37	37	37	37	37	37	37	37	37
Dholpur-Bari	20	20	20	28	37	37	37	36	36	36
Dhrangadra	21	21	21	21	40	43	43	43	43	40
Gaekwar's Dabhoi*	94	94	118	142	142	147	147	154	187	187
Gaekwar's Mehsana*	138	138	138	138	153	153	163	163	163	163
Gondal-Porbandar	..	148	148	148	148	148	148	148	148	(*b*) 106
Gwalior Light*	250	250	250	250	250	250	250	250	250	250
Hindupur*	51	51	51	51	51	51	51	51	51	51
Hingoli Branch*	..	..	50	50	50	50	50	50	50	50
Hyderabad-Godavari Valley*	391	391	391	391	391	391	391	391	391	391
Jaipur*	73	73	73	73	73	73	107	108	122	122
Jammu and Kashmir	16	16	16	16	16	16	16	16	16	16
Jamnagar	54	54	54	54	54	54	54	54	54	54
Jetalsar-Rajkot	46	46	46	46	46	46	46	46	46	46
Jind-Panipat *	..	..	..	..	..	..	26	26	26	26
Jodhpur-Bikaner	831	910	996	(*a*) 587	(*a*) 604	(*a*) 609	(*a*) 609	(*a*) 609	(*a*) 609	(*a*) 609
Junagad	..	89†	101	114	114	121	121	121	136	140
Khanpur-Chachran*	..	22	22	22	22	22	22	22	22	22
Khijadiya-Dhari *	..	..	..	26	26	26	37	37	37	37
Kolar District	..	..	..	..	11	41	64	64	64	64
Kolar Gold Fields*	10	10	10	10	10	10	10	10	10	10
Kolhapur*	29	29	29	29	29	29	29	29	29	29
Kosamba-Zankhvav	..	..	26	26	26	26	26	26	26	26
Ludhiana-Dhuri-Jakhal	79	79	79	79	79	79	79	79	79	79

* Worked by a Company.
‡ These are the latest figures published in 1920.

† Formerly worked as part of the Bhavnagar-Gondal-Junagad-Porbandar Railway.
(*a*) Jodhpur only—figures of Bikaner have been shown separately.
(*b*) Gondal only—Figures of Porbandar State Railway have been shown separately.

† Mileage of Railway Lines in India open for Traffic at end of year—*concld*

Railways.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
INDIAN STATE LINES—*concld.*										
Mohari-Barauli	..	..	..	..	..	..	15	15	15	15
Morvi	93	93	93	93	93	93	93	93	93	93
Mourbhanj*	32	32	32	32	32	32	32	32	32	32
Mysore-Arsikere	..	..	..	..	..	..	..	103	103	103
Mysore-Bangalore	..	..	..	..	..	..	..	..	..	‡ 86
Mysore-Nanjangud*	16	16	16	16	16	16	16	16	16	16
Nagda-Ujjain*	34	34	34	34	34	34	33	33	33	33
Nizam's Guaranteed*	330	330	330	330	330	330	330	330	330	330
Parlakimedi Light*	25	25	25	25	25	25	25	25	25	25
Petlad-Cambay*	34	34	34	34	34	34	34	34	34	34
Petlad-Vaso	..	..	..	..	16	19	19	19	19	19
Pipar Bilara Light	19	19	25	25	25	25	25	25	25	25
Porbandar-State	..	..	..	..	..	..	..	..	..	41
Rajpipla*	37	37	37	37	37	37	37	39	39	39
Rajpura-Bhatinda	107	107	108	108	108	108	108	108	108	108
Sangli*	5	5	5	5	5	5	5	5	5	5
Secunderabad-Gadwal *	..	..	..	..	..	46	103	103	103	104
Shoranur-Cochin*	65	65	65	65	65	65	65	65	65	65
Tarikere-Narasimharajapura	..	..	..	..	12	12	12	26	26	27
Tinnevelly-Quilon* (Travancore) Indian Section	58	58	58	58	58	58	58	96	96	96
Udaipur-Chitorgarh	67	67	67	67	67	67	67	67	67	67
Vijapur-Kalol-Kadi*	42	42	46	46	46	46	46	46	46	46
Total	3,852	3,974	4,198	4,364	4,504	4,599	4,825	5,027	5,089	5,177
FOREIGN LINES.										
Karaikkal-Peralam*	15	15	15	15	15	15	15	15	15	15
Pondicherry*	8	8	8	8	8	8	8	8	8	8
West of India Portuguese*	51	51	51	51	51	51	51	51	51	51
Total	74	74	74	74	74	74	74	74	74	74
Grand Total	32,099	32,839	33,484	34,656	35,285	35,833	36,286	36,334	36,616	36,735

* Worked by a Company.

† These are the latest figures published in 1920.
‡ Formerly worked as part of the Mysore Section of M. & S. M. Railway.

Presidents and Governors of Fort St. George in Madras.

William Gyfford 1684
Elihu Yale 1687
Nathaniel Higginson 1692
Thomas Pitt 1698
Gulston Addison 1709
Died at Madras, 17 Oct., 1709.
Edmund Montague (*Acting*) 1709
William Fraser (*Acting*) 1709
Edward Harrison 1710
Joseph Collet 1711
Francis Hastings (*Acting*) 1727
Nathaniel Elwick 1727
James Macrae 1725
George Morton Pitt 1730
Richard Benyon 1735
Nicholas Morse 1744
John Hinde .. ..
Charles Floyer 1747
Thomas Saunders 1750
George Pigot 1755
Robert Palk 1763
Charles Bourchier 1767
Josias DuPre 1770
Alexander Wynch 1773
Lord Pigot (Suspended) 1775
George Stratton 1776
John Whitehill (*Acting*) 1777
Sir Thomas Rumbold, Bart. 1778
John Whitehill (*Acting*) 1780
Charles Smith (*Acting*) 1780
Lord Macartney, K.B. 1781

Governors of Madras.

Lord Macartney, K.B 1785
Alexander Davidson (*Acting*) 1785
Major-General Sir Archibald Campbell, K.B. 1786
John Hollond (*Acting*) 1789
Edward J. Hollond (*Acting*) 1790
Major-General William Medows 1790
Sir Charles Oakeley, Bart. 1792
Lord Hobart 1794
Major-General George Harris (*Acting*) .. 1798
Lord Clive 1799
Lord William Cavendish Bentinck .. 1803
William Petrie (*Acting*) 1807
Sir George Hilaro Barlow, Bart., K.B. .. 1807
Lieut.-General the Hon. John Abercromby. 1813
The Right Hon. Hugh Elliot 1814
Major-General Sir Thomas Munro, Bart., K.C.B. Died, 6 July, 1827. 1820
Henry Sullivan Grœme (*Acting*) .. 1827
Stephen Rumbold Lushington 1827
Lieut.-General Sir Frederick Adam, K.C.B. 1832
George Edward Russell (*Acting*) 1837
Lord Elphinstone, G.C.H., P.C. 1837
Lieut.-General the Marquess of Tweeddale, K.T., G.B. 1842
Henry Dickinson (*Acting*) 1848
Major-General the Right Hon. Sir Henry Pottinger, Bart., G.C.B. 1848
Daniel Eliott (*Acting*) 1854
Lord Harris 1854
Sir Charles Edward Trevelyan, K.C.B. .. 1859
William Ambrose Morehead (*Acting*) .. 1860
Sir Henry George Ward, G.C.M.G. .. 1860
Died at Madras, 2 August, 1860.
William Ambrose Morehead (*Acting*) .. 1860
Sir William Thomas Denison, K.C.B. .. 1861
Acting Viceroy, 1863 to 1864.
Edward Maltby (*Acting*) 1863
Lord Napier of Merchistoun, K.T. (*a*) .. 1866
Acting Viceroy.
Alexander John Arbuthnot, C.S.I. (*Acting*) 1872
Lord Hobart 1872
Died at Madras, 27 April, 1875.
William Rose Robinson, C.S.I. (*Acting*) .. 1875
The Duke of Buckingham and Chandos .. 1875
The Right Hon. W. P. Adam 1880
Died at Ootacamund, 24 May, 1881.
William Hudleston (*Acting*) 1881
The Right Hon. M. E. Grant Duff .. 1881
The Right Hon. Robert Bourke, P.C. .. 1886
Lord Connemara, 12 May, 1887 (by creation).
John Henry Garstin, C.S.I. (*Acting*) .. 1890
Baron Wenlock 1891
Sir Arthur Elibank Havelock, G.C.M.G. .. 1896
Baron Ampthill 1900
Acting Viceroy and Governor-General, 1904.
James Thomson, C.S.I. (*Acting*) 1904
Gabriel Stokes, C.S.I. (*Acting*) 1906
Hon. Sir Arthur Lawley, K.C.M.G., G.C.I.E. 1906
Sir Thomas David Gibson-Carmichael, Bart., K.C.M.G., G.C.I.E. (*b*) 1911
Became Governor of Bengal, 1 April. 1912
Sir Murray Hammick, K.C.S.I., C.I.E. (*Acting*). 1912
Right Hon. Baron Pentland, P.C., G.C.I.E. 1912
Baron Willingdon 1913

(*a*) Afterwards (by creation) Baron Napier of Ettrick.

(*b*) Afterwards (by creation) Baron Carmichael of Skirling.

(*Continued from page 55.*)

Irrigation.

In the West irrigation is a rare luxury, designed where it exists to increase the productivity of a soil sure of a certain crop under a copious and well distributed rainfall. In great parts of the East, and especially in India, it is a necessity to existence. For in India there are large tracts, such as the deserts of Sind and the South-West Punjab, which are practically rainless; there are others, such as the Deccan plateau, where cultivation is exceedingly precarious, owing to the irregularity of the rainfall and the long intervals when the crops may be exposed to a blazing sun and a desiccating wind; there are some crops, like rice and sugar-cane, which, except in a few highly favoured districts, can only be matured by the aid of irrigation. There are great areas where a single crop, which is called the *kharif*, or rain crop, can in normal years be raised by the unassisted rainfall, but where the second crop, the *rabi* or cold weather crop, is largely dependent on irrigation. Inasmuch as in India sixty-five per cent. of the population is still dependent upon agriculture for the means of livelihood, this brief summary indicates the enormous importance of irrigation to the community.

Its Early History.—It is natural, in such conditions, that irrigation in India should have been practised from time immemorial. In the history and imagery of the East, there is no figure more familiar than the well, with primitive means for raising the water, followed to-day much as they were in Bible days. In the early records of the peoples of India, dating back to many years before the Christian era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the innumerable tanks in Southern India have been in use for many generations; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigation channels, which have been buried for centuries in the undergrowth of the forests. But in the direction of constructing large and scientific works for the utilisation of the surplus waters of the great river little was done before the advent of British rule, and they are comparatively of recent date.

The State Intervenes.—Irrigation works in India may be divided into three main heads—wells, tanks and canals. The greatest and the most impressive are the canals, and these may arrest attention first, because they constitute one of the most enduring monuments to British rule. They have in British India been constructed by direct State agency. In the early days of modern irrigation, certain works in the Madras Presidency were carried out by a guaranteed company, and the Orissa canal project was commenced through the same agency. Both Companies fell into difficulties, and the system into disfavour; during the Viceroyalty of Lord Lawrence it was decided that all irrigation works which promised a reasonable return on the capital expenditure should be constructed through direct agency and should be constructed by the State from loan funds as productive public works.

The British Inheritance.—The British Government in India inherited a few major irrigation works. One of these was the Grand Anicut—the local term for barrage—stretching across the width of the Cauvery River in Madras. In the Punjab there were a few canals, chiefly inundation—that is above the normal bed of the river and fed from the flood current—constructed by the Muhammedan and Sikh rulers, and owing to its proximity to Delhi, the waters of the Jumna were brought to the neighbourhood of the city by the Mughals. It is doubtful if these works ever irrigated any considerable areas or conferred much benefit on the people, but they suggested the model on which the British engineers worked. In Southern India, Sir Arthur Cotton constructed the upper Anicut across the Coleroon River, so as to secure the full level required for the utilisation of the Grand Anicut across the Cauvery. He also designed the works which, constructed and improved at an outlay of three crores, irrigate more than two million acres in the Godaveri and Kistna deltas. In Northern India Sir Probyn Cautley constructed the great Ganges Canal which takes off from the river near Hardwar, and which in magnitude and boldness of design has not been surpassed by any irrigation work in India or elsewhere. In this way were laid the foundations of the irrigation system in India. The work was gradually pushed forward. In Northern India a great system of canals was constructed, chiefly in the Punjab and the United Provinces. Some of these, like the great Chenab Canal, ought to be classed amongst the wonders of the world. It irrigates nearly two million acres, or about two-fifths of the cultivable area in Egypt, with an ordinary discharge of eleven thousand cubic feet per second, or about six times that of the Thames at Teddington. The Chenab and the Jhelum Canals brought under irrigation great areas of Government waste, and thereby allowed the system of State colonisation, which relieved the congestion on the older villages of the Punjab, and established colonies of over one million of people on what had been the desolate abode of a handful of nomads. In the Bombay Deccan a few protective works were constructed, like Lake Fife and Lake Whiting, drawing their supplies from the Ghats and spilling them over the arid tracts of the Deccan. In Madras there was completed the boldest and most imaginative irrigation work in the world; by the device of constructing a reservoir at Periyar, on the outer slopes of the ghats, and carrying the water by means of a tunnel through the intervening hill, the Madras Government turned the river back on its watershed and poured its waters over fertile lands starved by want of moisture. But these Deccan works did not pay. The cultivators would not use the water in years of good rainfall, and there was not enough to go far in seasons of drought; the inevitable result of such conditions was to concentrate attention upon the remunerative works on the rivers of the Punjab, and to leave protective irrigation to wilt for want of funds.

The Irrigation Commission.—In order to substitute policy for spasmodic effort, the Irrigation Commission was appointed by Lord Curzon's Government in 1901. It made a

detailed survey of the conditions of the country, and produced the report which is the foundation of Indian Irrigation policy to-day. The figures compiled by the Commission illustrate the progress which had been made up to that period. They showed that out of an area of 226 million acres annually under crop in the irrigating provinces of British India, in round numbers 44 million acres, or 19½ per cent. were ordinarily irrigated. Of the total area irrigated 18½ million acres or 42 per cent. was watered by State works (canals and tanks), and 25½ million acres, or 58 per cent. from private works, of which rather more than one half was from wells. During the previous quarter of a century the area irrigated by Government works had been increased by 8 million acres, or by eighty per cent. and the Commission estimated that during the same period the area under private irrigation had increased by at least three million acres or a total addition to the irrigated area in British India of 11 million acres or 33 per cent. Including the Native States the area under irrigation annually within the British Empire was placed at 53 million acres (19 million from canals, 16 million from wells, 10 million from tanks, and 8 million from other sources). The Commission reported that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was limited, being restricted to the Punjab, Sind and parts of Madras—tracts for the most part not liable to famine. They recommended that works of this class should be constructed as fast as possible, not only because they would be profitable investments, but also because they would increase the food supply of the country. Then addressing themselves to the question of famine protection, they worked out a very interesting equation. Taking the district of Sholapur, in the Bombay Deccan, perhaps the most famine-susceptible district in India, they calculated that the cost of famine relief in it was 5 lakhs of rupees a year. From this deduction, and making allowance for the advantage of famine avoidance as compared with famine relief, they said that the State was justified in protecting the land in such district at a cost of 221 rupees per acre. For the general protection of the Bombay Deccan they recommended canals fed from storage lakes in the Ghats, where the rainfall has never been known to fail even in the driest years. For Madras they recommended the investigation of the old Tungabhadra project, and of a scheme for storage work on the Kistna. They proposed that Government should undertake the construction of protective works for the rice-growing districts of the Central Provinces and the Ken Canal project in Bundelkhand. The Commission further sketched out a rough programme of new major works to be constructed in different parts of India, which would cost not less than 44 crores of rupees and would result in an increase of 6,500,000 acres to the irrigated area. They estimated that the construction of these works would impose a permanent yearly burden of nearly 74 lakhs on the State, through the excess of interest charges on capital cost over the net revenue produced from the works. Against this would have to be set the reduction in the cost of future famines resulting from the construction of the works, which the Commission put at 31 lakhs per annum. The balance of 43 lakhs would represent the net annual cost of the works to the State, or the price to be paid for the protection from famine which the works would afford, and for all other indirect advantages which might be attributed to them. The principal effect of the Irrigation Commission's report was to substitute policy for spasmodic effort, and the progress since made has been remarkable.

Irrigation Dues.—The charges for irrigation, whether taken in the form of enhanced land revenue or of occupiers' and owners' rates, vary very much, depending on the kind of crop, the quantity of water required for it and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the outturn. In the immediate vicinity of Poona a rate of Rs. 50 an acre is paid for sugarcane. This is quite an exceptional rate, it obtains over only a limited area, and is made practicable only because the cultivators, by high manuring, can raise a crop valued at nearly eight-hundred rupees an acre. On other parts of the Mutha canal the rate varies from Rs. 40 to Rs. 12, and on other canals in the Bombay Deccan from Rs. 25 to Rs. 10 per acre. In Madras the maximum rate for sugarcane is Rs. 10, and in the Punjab it does not exceed Rs. 8-8. The rate charged for rice varies in Madras from Rs. 5 to 2, and in Bengal from Rs. 2-8 to Rs. 1-8 per acre. In both these provinces irrigation is practically confined to rice; in the Punjab, where this crop is not extensively grown, the rate varies from Rs. 7 to Rs. 3-4 per acre. The ordinary rate in the Punjab for wheat, which is the principal crop, varies from Rs. 4-4 to Rs. 3-12, and for fodder crops from Rs. 3 to 2-8 per acre. The average rate realised from major works for irrigation of all kinds is about Rs. 3-8 per acre, the provincial averages being Rs. 1-9 in Sind and Bengal; Rs. 3-4 in the Punjab; Rs. 4-8 in Madras, the United Provinces and the Bombay Deccan. The charges for irrigation may be taken as varying from 10 to 12 per cent. of the value of the crop, except in Bengal and the Bombay Deccan, where the average is little more than six per cent.

Canals and Navigation.—Twenty years ago a great deal was heard about the desirability of constructing navigation canals, either in conjunction with irrigation or for transport, pure and simple. The idea is now exploded. It received a certain stimulus from the unprofitable character of Indian railways, and the handsome earnings of the irrigation works; it received its quietus when the railways turned the corner. Broadly speaking it may be said that navigation and irrigation rights clash; navigation is not only costly, but it cannot be maintained during the season of short supply, except to the detriment of irrigation. Outside the deltaic tracts of Bengal, Orissa, Madras and Sind, navigable canals will never be of much use for the purpose of inland navigation. There is however considerable scope for connecting canals to improve the facilities for navigation on the great river system of Eastern Bengal. This is a question which is now engaging the attention of the Government.

IRRIGATION OPERATIONS DURING 1919-20.

The purpose of artificial irrigation being to supplement the rainfall on which the production of crops so largely depends, the demand for canal irrigation varies in each year with the nature of the monsoon and the extent of the rain. In the year under review the Arabian Sea monsoon appeared in the Peninsula at about the normal date, while the Bay current arrived in north-east India about a week before the usual time. Up to about the middle of July both currents were exceedingly fitful and were mainly confined to the Central Provinces and the adjoining districts to the east, to the detriment of north-west India where, consequently, intense hot weather conditions prevailed. The monsoon began to penetrate into north-west India about the 12th of July and by the 24th had spread over practically the whole area. During the rest of the month the current was very active and there was abundant rain over most of the Peninsula and north-west India. In August the monsoon was well above its average strength but the rainfall was concentrated into northern and central India at the expense of the Peninsula. This distribution was reversed in September, the Peninsula generally receiving abundant rain and northern and central India less than its proper share. The monsoon rains of the year, though only 5 per cent. in excess of the normal, contrasted very favourably with those of 1918, which were as much as 18 per cent. in defect. In the major irrigating provinces the rainfall was below normal only in Sind.

Total Area Irrigated.—During the year 1919-20, the total area irrigated by all classes of works in India, excluding the areas irrigated in the Indian States, amounted to over 28 million acres or 3 million acres more than in the previous year. Towards this area Productive Works contributed 18,876,234 acres, Protective Works 717,377 acres, and Minor Works, 8,551,253 acres.

Comparisons.—The following table compares the area irrigated by Government works, excluding Indian States, during the year under review with the average area so irrigated during the previous triennium :—

Province	Productive.		Protective.		Minor.		Total	
	1916-17 to 1918-19.	1919-20.	1916-17 to 1918-19	1919-20	1916-17 to 1918-19.	1919-20	1916-17 to 1918-19	1919-20.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Acres.	Acres.
Madras ..	3,492,027	3,717,480	106,152	108,519	3,560,228	3,866,531	7,158,707	7,692,530
Bombay Deccan	37,355	55272	85,011	134,690	182,228	211,198	304,594	401,160
Sind ..	1,285,548	1,357,585	..	..	2,032,462	2,124,700	3,318,010	3,482,285
Bengal ..	84,451	89,692	..	..	25,292	20,799	109,746	110,491
United Provinces.	2,923,602	3,086,095	185,290	229,334	157,585	136,229	3,266,477	3,451,658
Punjab ..	7,720,171	8,890,005	..	..	925,948	944,680	8,646,119	9,834,685
Bihar and Orissa.	844,747	847,118	54,580	94,699	1,480	3,107	900,807	944,924
Burma ..	275,413	317,395	..	..	1,147,049	1,169,316	1,422,462	1,486,711
Central Provinces.	88,396	148,592	93,317	150,135	21,468	26,927	203,181	325,654
North-West Frontier Province.	345,118	367,000	..	..	....	..	345,148	367,000
Rajputana ..	..	..		..	20,397	26,895	20,397	26,894
Baluchistan .	..	..	.	..	14,305	20,572	14,305	20,572
Total ..	17,096,861	18,876,234	524,650	717,377	8,088,442	8,551,253	25,709,953	28,144,864

Total Area Irrigated.—The area irrigated by Government irrigation works in 1919-20 is the largest on record, exceeding the previous record of the year 1916-17 by 2,117,900 acres.

The area irrigated by Productive Works was greatest in the Punjab, where over 8¾ millions acres were recorded, last year's figure being exceeded by more than a million acres. The Madras Presidency came next with an area of nearly 3¾ million acres while in the United Provinces and Sind, the area irrigated by Productive Canals amounted to 3 and 1⅓ million acres, respectively. Bihar and Orissa contributed 847,000 acres, the North-West Frontier Province 367,000 acres, and Burma 317,000 acres.

The total capital outlay, direct and indirect, to the end of the year 1919-20 on Productive Irrigation Works, excluding navigation works but including expenditure incurred on irrigation works under construction, amounted to a little over Rs. 5,835 lakhs. The gross revenue for

the year amounted to Rs. 810 lakhs and the working expenses to Rs. 242 lakhs. The net revenue was therefore Rs. 568 lakhs, which represents a return of 9¾ per cent. on the total capital outlay Of the several provinces, the return on capital outlay was highest in the Punjab, where the canals yielded 14.44 per cent In Madras, including schemes which have proved unremunerative, the percentage of return was 10 75, while in the United Provinces a return of 10·25 per cent. was realized.

Protective Works.—The total area irrigated by the thirty-eight Protective Works in operation during the year under review amounted to 717,400 acres. In the United Provinces, where works of this class have been in operation longer than in the other provinces, the area irrigated was 229,300 acres. The Central Provinces came next with 150,100 acres. Protective Works irrigated 134,700 acres in the Deccan and Gujarat, 108,500 acres in the Madras Presidency and 94,700 acres in Bihar and Orissa.

The total capital outlay to the end of the year under review on Protective Irrigation Works amounted to 1,112 lakhs. The net revenue for the year was over four lakhs, which is equivlant to 0·37 per cent. on the total capital outlay This low return is partly due to the fact that the capital account is at present inflated by expenditure on works under construction which have not yet commenced to earn revenue. The net revenue earned was, however, double that of the previous year.

Minor Works.—The minor works are, for purposes of accounting, sub-divided into three classes as described below :—

Class I.—Works for which Capital and Revenue Accounts are kept.—These are works, the estimated capital cost of which exceeds Rs. 50,000 and the revenue from which is expected to cover the total working expenses.

Class II.—Works for which only Revenue Accounts are kept.—These are generally works costing less than Rs. 50,000.

Class III.—Works for which neither Capital nor Revenue Accounts are kept.—The works of this class consist mainly of small tanks and field embankments or small drainage schemes to prevent deterioration of land or to effect improvements of land with a view to rendering it fit for cultivation.

One hundred and twenty-two minor works of the first class described above were in operation at the close of the year 1919-20, one hundred and fifteen being irrigation works and seven navigation works, the area irrigated by the former amounting to 2,005,066 acres The total capital outlay on irrigation works of this class at the close of the year was Rs. 446¼ lakhs, and the net revenue amounted to nearly Rs. 40 lakhs, representing a return of 8·9 per cent. on capital. On the seven purely navigation works, the total capital outlay at the end of 1919-20 amounted to 242¼ lakhs. The working of the navigation canals resulted in a loss of Rs. 3 lakhs. The net revenue realized during 1919-20 from Class I Irrigation and Navigation Works as a whole represented a return of 5·35 per cent. on a total capital outlay of Rs. 688¼ lakhs. The total area irrigated by minor works of all classes amounted to 8,551,000 acres, or two-sevenths of the whole area irrigated during the year by Government canals.

Total cropped area.—A comparison of the acreage of crops matured during 1919-20 by means of Government irrigation systems with the total area under cultivation in the several provinces is given beow :—

Province	Net area cropped.	Area Irrigated by Government irrigation works	Percentage of irrigated area to total cropped area.	Capital cost of Government irrigation works to end of 1919-20 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation in lakhs of rupees.
	Acres.	Acres.		Rs.	Rs.
Burma	14,862,000	1,487,000	10·0	2,76	5,70
Bengal	24,470,000	110,000	0·4	2.59	83
Bihar and Orissa	25,900,000	945,000	3·6	6,32	9 57
United Provinces of Agra and Oudh.	34,959,000	3,452,000	9 9	13,25	28,66
Ajmer-Merwara	286,000	27,000	9 4	35	9
Punjab	25,364,000	9,835,000	38·8	22,51	62,41
North-West Frontier Province.	2,675,000	367,000	13·7	2.77	2,53
Sind	4,389,000	3,482,000	79·3	3,35	10,68
Bombay Deccan	23,807,000	401,000	1·7	5,16	3,84
Central Provinces (excluding Berar).	16,930,000	326,000	2·0	3,71	2,26
Madras	38,210,000	7,695,000	20·1	11,72	46,98
Baluchistan	217,000	20,000	10·6	44	8
Total ..	212,069,000	28,145,000	13·3	79,34	1,73,63

It will be seen that 13 per cent. of the cropped area was irrigated by Government irrigation works, and that the estimated value of the crops so irrigated amounted to nearly 2¼ times the total capital expended on the works.

Canal Colonies.—One of the most interesting developments is the Canal Colonies of the Punjab. In the early eighties the drier districts and waste lands began to receive attention. The Lower Sohag and Para Canals, which take out from the right bank of the Sutlej opposite Fazilka, and the Sidhnai on the left bank of the Ravi above its junction with the Chenab, were constructed between 1883 and 1887 and, besides being immediately successful, they afforded valuable experience in colonization. The Sidhnai Canal, to which the supply is ensured by a needle dam across the river, irrigates some 350,000 acres annually and gives a net return of between 30 and 40 per cent. upon a capital outlay of rather more than 13 lakhs of rupees. The Lower Chenab Canal, for the irrigation of the lower portion of the tract lying between the Chenab and the Ravi rivers, was opened as an inundation canal in 1887, but from the outset it suffered from deposits of silt, and it was realized that without a weir across the river at its head, to ensure its supply, it would be a complete failure. As soon as the supply was assured by the weir, Colonel Jacob, R. E., pressed for the extension of the canal into the large areas of crown waste which were till then lying practically valueless. This extension was sanctioned in 1891 and the colonization of the waste lands then commenced. The Lower Chenab Canal is easily the most productive work in India. It irrigates about 2¼ million acres annually and produces a net revenue of 128 lakhs of rupees on a capital outlay of 325 lakhs, a return of nearly 40 per cent. The accumulated surplus revenues of this canal, after paying interest charges, amount to no less than 1,388 lakhs of rupees.

Lower Jhelum Canal, 1898-1902.—The Lower Jhelum Canal project was sanctioned in 1888, but work on it was postponed for want of funds till the Lower Chenab Canal had made considerable progress and it was not until 1898 that the work was taken up in earnest. It was opened for irrigation in 1902, although construction was not quite completed.

In the case of both the Lower Chenab and Lower Jhelum Canals, construction and irrigation went on side by side, since the tract being dry and inhospitable, the canals had themselves to bring water for the construction of the masonry works. The canal commands the lower portion of the tract between the Chenab and the Jhelum, and is another extremely lucrative work, irrigating about 800,000 acres annually, and returning over 20 per cent. on an outlay of 162 lakhs of rupees.

The Triple Project.—The Triple Canal Project was commenced in 1905; of its three component parts, the Upper Chenab Canal was opened in 1912, the Lower Bari Doab Canal in 1913, and the Upper Jhelum Canal in 1915. A reference to the map will show that the four rivers, Jhelum, Chenab, Ravi and Sutlej, flow convergingly in a south-westerly direction, the first named being the most northerly. The particular problem confronting the Punjab engineers was the irrigation of the tract between the Sutlej and the Ravi, and since the supply of the latter river was required in its entirety for the existing Upper Bari Doab and Sidhnai canals, a canal from the Sutlej naturally offered the easiest solution. A project for the irrigation of the lower Bari Doab from the Sutlej was prepared, but, as the result of representations made by Colonel Jacob and Sir J. Wilson, the Irrigation Commission of 1901-02 advised the consideration, in preference to it, of a project to irrigate the Doab by water brought from the river Jhelum across the rivers Chenab and Ravi. Under this project water is carried by the Upper Jhelum Canal from Mangla on the river Jhelum to a point above Khanki, the headworks of the existing Lower Chenab Canal, on the Chenab. This renders it possible, without interference with existing irrigation, to draw off water from the Chenab at Merala, forty miles above Khanki, and to convey it by the Upper Chenab canal to the Ravi at Balloki, crossing the latter river by means of the Balloki level crossing. The water is thus delivered on to the Ravi-Sutlej tract for irrigation by the Lower Bari Doab Canal.

The Frontier.—Equally remarkable results have been achieved on the Frontier. The introduction of irrigation by the Lower Swat Canal has changed completely the character of the tract served. Before the advent of the canal it was uninhabited and practically uninhabitable, covered with thorn bushes and not a tree to be seen. It is now, and was even in 1894, when the completion report was written, dotted throughout with villages occupied by a law-abiding and contented peasantry, and the wilderness of thorn has given place to a vast sheet of cultivation, while avenues of trees have sprung up along the roads as well as along the canal and its distributing channels. The state of the tract is in every way a vast contrast to what it was when the surveys for the canal were in progress, at which time no officer was allowed to leave cantonments without himself being armed and being attended by an armed escort.

Indian Soldier Colony.—An area of 171,500 acres has been reserved in the Lower Bari Doab colony for distribution to Indian officers, non-commissioned officers and soldiers who rendered distinguished service in the great war, and the distribution is being made under the orders of the Commander-in-Chief through the agency of the Indian Soldiers' Board on the recommendations of Officers Commanding units.

WELLS AND TANKS.

So far we have dealt only with the great irrigation schemes. They are essentially exotic, the products of British rule; the real eastern instrument is the well. The most recent figures give thirty per cent. of the irrigated area in India as being under wells. Moreover the well is an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he uses from a varying depth, he is more careful in the use of it; well water exerts at least three times as much duty as canal water. Again, owing to the cost of lifting, it is generally used for high grade crops. It is estimated that well-irrigated lands produce at

least one-third more than canal-watered lands. Although the huge areas brought under cultivation by a single canal scheme tend to reduce the disproportion between the two systems, it must be remembered that the spread of canals increases the possibilities of well irrigation by adding, through seepage, to the store of subsoil water and raising the level.

Varieties of Wells.—Wells in India are of every description. They may be just holes in the ground, sunk to subsoil level, used to a year or two and then allowed to fall into decay. These are temporary or kacha wells or they may be lined with timber, or with brick or stone. They vary from the kacha well costing a few rupees to the masonry well, which will run into thousands, or in the sandy wastes of Bikanir, where the water level is three hundred feet below the surface, to still more. The means of raising the water vary in equal degree. There is the *picottah*, or weighted lever, raising a bucket at the end of a pivoted pole, just as is done on the banks of the Nile. This is rarely used for lifts beyond fifteen feet. For greater lifts bullock power is invariably used. This is generally harnessed to the *mot*, or leather bag, which is passed over a pulley overhanging the well, then raised by bullocks who walk down a ramp of a length approximating to the depth of the well. Sometimes the *mot* is just a leather bag, more often it is a self-acting arrangement, which discharges the water into a sump automatically on reaching the surface. By this means from thirty to forty gallons of water are raised at a time, and in its simplicity, and the ease with which the apparatus can be constructed and repaired by village labour, the *mot* is unsurpassed in efficiency. There is also the Persian wheel, an endless chain of earthenware pots running round a wheel. Recently attempts have been made, particularly in Madras, to substitute mechanical power, furnished by oil engines, for the bullock. This has been found economical where the water supply is sufficiently large, especially where two or three wells can be linked. Government have systematically encouraged well irrigation by advancing funds for the purpose and exempting well watered lands from extra assessment due to improvement. These advances, termed *takavi*, are freely made to approved applicants, the general rate of interest being 6½ per cent In Madras and Bombay ryots who construct wells, or other works of agricultural improvement, are exempt from enhanced assessment on that account. In other provinces the exemption lasts for specific periods, the term generally being long enough to recoup the owner the capital sunk.

Tanks.—Next to the well, the indigenous instrument of irrigation is the tank. The village or the roadside tank is one of the most conspicuous features in the Indian scene. The Indian tank may be any size. It may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar Lake in Travancore, holding up from four to seven billion cubic feet of water, and spreading their waters through great chains of canal, to the little village tank irrigating ten acres. They date back to a very early stage in Indian civilisation. Some of these works in Madras are of great size, holding from three to four billion cubic feet, with water spreads of nine miles. The inscriptions of two large tanks in the Chingleput district of Madras, which still irrigate from two to four thousand acres are said to be over 1,100 years old. Tank irrigation is practically unknown in the Punjab and in Sind, but it is found in some form or other in all other provinces, including Burma, and finds its highest development in Madras. In the ryotwari tracts of Bombay and Madras all but the smallest tanks are controlled by Government. In the zemindari tracts only the large tanks are State works. According to the latest figures the area irrigated from tanks is about eight million acres, but in many cases the supply is extremely precarious. So far from tanks being a refuge in famine they are often quite useless inasmuch as the rainfall does not suffice to fill them and they remain dry throughout the season.

Bibliography.—"Irrigation in India: Review for 1919-20" (Govt. Press, Calcutta. Price, As. 12. It has been decided that, in future, the full review shall only be published triennially and that, in the intermediate years supplements shall be issued dealing with the year in question and bringing up to date the information contained in the previous triennial publication. The annual review for 1919-20 forms the second of these supplements; the first triennial review will deal with irrigation in India up to the end of the year 1920-1921.

BUILDINGS AND ROADS.

The Buildings and Roads Branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1914-15 under the various heads is shown in the following table :—

——	Central Provinces and Berar.	Burma.	Assam.	Bengal	Bihar and Orissa.	United Provinces of Agra and Oudh.	Punjab.	North-West Frontier Province.	Madras.	Bombay.	India General.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Imperial	72,050	49,661	2,533	89,409	26,255	74,920	37,148	208,198	36,842	89,536	230,674	908,226
Provincial*	529,551	775,734	364,270	831,581	664,327	507,741	610,853	..	1,086,986	756,747	..	6,127,790
Total ..	601,601	825,395	366,803	920,990	690,582	582,661	648,001	208,198	1,123,828	837,283	230,674	7,036,016

* Includes expenditure by the Civil Department in addition to that by the Public Works Department.

Expenditure by Civil Officers from Imperial Funds ..	£	52,995
Expenditure in England	£	87,739
Grand Total	£	7,176,750

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the Boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works Officers.

The School of Oriental Studies.

This School was established by Royal Charter in June 1916. The purposes of the School (as set out in the Charter) are to be a School of Oriental Studies in the University of London to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion, and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession, and to do all or any of such other things as the Governing Body of the School consider conducive or incidental thereto, having regard to the provision for those purposes which already exists elsewhere and in particular to the co-ordination of the work of the School with that of similar institutions both in this country and in our Eastern and African Dominions and with the work of the University of London and its other Schools.

The School was created as the outcome of the Reports of two Government Committees, the first Treasury Committee presided over by the late Lord Reay, the second an India Office Committee presided over by the first Lord Cromer. The School provides London with a centre for Oriental teaching adequate to the needs of the metropolis and of the Empire, and one that removes the reproach that London has been without an Oriental School comparable to those of Paris, Berlin, and Petrograd.

The School possesses noble and adequate buildings, in Finsbury Circus, provided for them by Government under the London Institution (Transfer) Act of 1912. The sum of £25,000 required for the alteration and extension of the buildings of the London Institution for the purposes of the School was voted by Parliament. The School buildings are quiet, although they are in the heart of the City. The School provides teaching in more than forty languages In a considerable proportion of the spoken languages instruction is given by teachers belonging to the countries where the languages in question are spoken, as it is the aim of the School to provide as far as possble both European and Oriental Lecturers in the principal languages included in the curriculum.

Courses on the History, Religions, and Customs of Oriental and African countries form a special feature in the teaching of the School Inter-collegiate arrangements have been made with University College for instruction in Phonetics, modern phonetic methods being used to facilitate the acquirement of correct pronunciation. Inter-collegiate arrangements will also be made with the London School of Economics for instruction in the Sociology and Anthropology of the less civilised races.

Courses are also provided in Indian Law and the History of India, and arrangements are made from time to time for special courses of lectures to be given by distinguished orientalists not of the staff of the School.

Patron, H. M. the King. *Chairman of the Governing Body*, Sir John Hewett, G.C.S.I., K.B E., C.I.E. *Director*, Professor Sir E. Denison Ross, C.I.E., PH.D.

Teaching Staff.

Name	*Subjects.*	*Title.*
Sheikh M. H Abdel Razek	Arabic (Egyptian)	Lecturer.
§ Sir T W. Arnold, C.I.E., LITT D M.A	Arabic (Classical)	Professor.
† T. Grahame Bailey, M A., B.D , D.LITT.	Hindustani (Urdu & Hindi)	Reader.
* L. D. Barnett, LITT.D , M A	Sanskrit	Lecturer
Hajji A. M. Bekhash	Arabic (Mesopotamian)	,,
† C O Blagden, M.A ...	Malay	Reader.
* W. C. Ch'en, PH D., M A.	Chinese (Mandarin)	Lecturer.
G. H. Darab Khan	Persian	,,
* Carline A. F. Rhys Davids, D.LITT., M.A	Pali	,,
* W. Doderet, M.A., I.C.S., (retired.)	Gujarati	,,
E. Dora Edwards	Chinese (Mandarin)	,,
H. A. R. Gibb, M.A.	Arabic (Classical)	,,
J. Withers Gill	Hausa	,,
* A. L. Hough	Burmese	,,
* A. D. Innes, M.A.	History of India	,,
Commander N. E. Isemonger, R.N., (retired)	Japanese	,,
S. G. Kanhere	Marathi	,,
T. Kitamura	Japanese	,,
* A. Q. Malik	Hindustani	,,
* W. M. McGovern	Japanese	,,
W. Sutton Page, B.A., B D., O.B.E.	Bengali	,,
* T. G. F. Palmer	Hindustan	,,
† W. Hopkyn Rees	Chinese	Reader.
Ali Riza Bey	Turkish	Lecturer.
‡ Sir E. Denison Ross, C.I.E., PH.D.	Persian	Professor.
* A. Sabonadiere, I.C.S., (retired)	Indian Law	Lecturer.
* A. Sefi	Arabic (Syrian & Classical)	Lecturer.
† Alice Werner	Swahili and other Bantu Languages.	Reader.
† M. de Z. Wickremasinghe, M.A.	Tamil and Telugu	,,
* C. E. Wilson, B.A.	Persian	Lecturer.

* Recoginsed Teacher in the University of London.
† University Reader and Appointed Teacher.
‡ University Professor of Persian and Appointed Teacher.
§ University Professor of Arabic and Appointed Teacher.

Trade.

The broad characteristics of the trade of India are familiar to readers of the Indian Year Book. India is chiefly an agricultural country, for 72 per cent. of its people are directly dependent upon agriculture for their means of livelihood. Consequently, the prosperity of the land is largely determined by the character of the south-west monsoon rains. An area which every year grows larger is protected by irrigation and the extension of these works, together with the increased resisting power of the people and the growth of the manufacturing industry, is expected to make the population immune to the shock of such famines as those of 1896-97, 1899-1900 and 1918-19. But many of the irrigation works, such as tanks and wells, depend on the rains for their replenishment. Consequently, the rains mainly determine the export trade and the consequent purchasing power of the people. Another feature that arises from these conditions is that the imports are chiefly manufactured goods and the exports produce.

The main conclusions to be drawn from the trade statistics of the last official year are indicated in the annual Review of the Trade of India by Mr. H. A. F. Lindsay, Director-General of Commercial Intelligence, from which the following details are mainly drawn.

The year 1920-21 carried Indian trade one more stage on its slow return to normal conditions. The previous year had witnessed an unprecedented boom when Indian exports increased monthly from Rs. 22½ crores in April 1919 to the record figure of Rs. 31½ crores in March 1920. Imports had also increased during the same months from nearly Rs. 14½ to nearly Rs. 24 crores. The total trade of that year, imports and exports combined, had reached the record value of Rs. 535 crores. The pace was too fast, however and before the year 1919-20 had closed, it had given the first clear indications that the inevitable reaction was at hand.

Before long, deflation both of exchange and prices—a necessary preliminary to a return to normal trade conditions—set in. On the 1st of April 1920 silver was quoted at 72⅛*d.* per ounce, by 31st March 1921 it had fallen continuously; (except for an upward tendency noted in July, August, and September) to 33⅛*d.* The sterling value of the rupee had fallen steadily during the same period from 2*s.* 4*d.* to 1*s.* $3\frac{11}{16}$*d.* On the evidence of index numbers the United Kingdom, America and Japan, who are India's best customers and took between them nearly 46 per cent. of her exports in 1920-21, showed early in the year all the symptoms of congested stocks and slackening demands. Countries normally taking Indian goods and on the right side of the exchange fence found themselves for the most part in possession of ample stocks and would take no more. Russia and Central Europe were known to be short, but unable to buy.

Fortunately the slump found India, commercially and financially, in a strong position. Her currency does not show the signs of inflation so marked in other countries. Deflation of her note-issue was carried out to the extent of Rs. 19 crores from Rs. 185 crores in January 1920 to Rs. 166 crores in March 1921. During the same period, their metallic backing in India increased from nearly Rs. 75 to Rs. 90 crores, of which Rs. 24 crores consisted of gold valued at Rs. 10 to the £1. Financial stringency was at no time during the year so apparent or so keenly felt as in Europe and America. During the war, her goods were in keen demand, and on the credits thus obtained she has been able to lay deep and strong foundations for industrial and commercial expansion. It is a relevant fact that, in spite of adverse trade conditions, which operated persistently throughout 1920-21, the total trade of the year, imports and exports combined, reached the very high figure of Rs. 592 crores and thus exceeded the record (Rs. 535 crores) of the previous year.

By the end of the financial year European continental countries had already begun to purchase Indian goods in small quantities and to send her some exports in return and the 1921 rains were ample and well distributed.

Imports of Merchandise.

The volume of imports generally affords a pretty safe indication of the extent firstly of stocks and secondly of credits; always provided that extraneous controls and restrictions are absent or ineffectual, and that the laws of demand and supply have full play. The following table is instructive in this connection:

Imports.

Five yearly averages.	Rs (lakhs)
Five years ending 1903-04 .	78,42
,, ,, ,, 1908-09	1,11,85
,, ,, ,, 1913-14 (pre war)	1,45,85
,, ,, ,, 1918-19 (war-period) . . .	1,47,80

Imports.

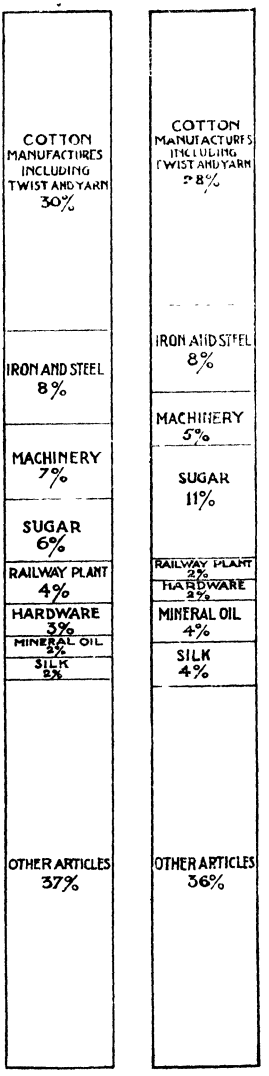
Yearly totals.	Rs. (lakhs)
Year 1913-14 (pre-war) .	1,83,25
,, 1914-15 . . .	1,37,93
,, 1915-16	1,31,99
,, 1916-17	1,49,63
,, 1917-18	1,50,42
,, 1918-19	1,69,03
,, 1919-20	2,07,97
,, 1920-21	3,35,60

The demand for imported goods in India was starved during the artificial trade conditions of the war. During 1918-19 there was a recovery, but only a partial recovery, as war conditions were fully operative during eight months

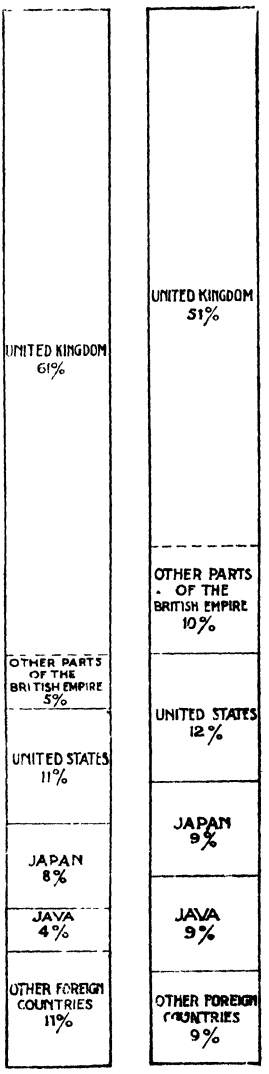
IMPORTS.

Share of the Principal Articles and Countries in the Import Trade of British India in 1920-21, as compared with the year 1919-20.

(1) Share of Principal Articles.



(2) Share of Principal Countries



of that year, while the remaining four months were not sufficient to cover more than the preliminary steps towards decontrol and towards a return to peace conditions of manufacture. In the result, imports, in spite of high prices, did not attain even the values of 1913-14 During 1919-20 the recovery was more marked, and a total of nearly Rs. 208 crores of imports was reached. The theorist would say that satiety point had been reached. But if 1919-20 was a record year for imports, it was no less so for exports, and the balance in India's favour, on the year's exchange of merchandise, was as high as Rs. 119 crores. Exchange was high, credits were good, foreign prices were still rising. It is true that local stocks were also rising, but it must not be forgotten that in important lines such as piece-goods, dyes, sugar, provisions and mineral oils, India is accustomed to work on ample margins, which have been roughly estimated at nine and in some cases as much as twelve months' supplies. When one compares India's purchasing power in 1919-20 with that of 1913-14, and discounts the rising prices of the post-war year, one is not surprised either at the volume of her import during 1919-20 or at the continuance of her purchases on an increasing scale well into 1920-21. It is true that, at the time of writing, there are indications of a glut. But the indications seem to come more from scattered centres of distribution than from the ample districts which they feed and which furnish collectively during seasons of plenty the vast demands of India. The monsoon of 1920 was poor, and the district demands were limited in consequence. Were these demands released, it would perhaps be found that the glut is more apparent than real. To what extent foreign purchases will be curtailed as a result of the increase in the general rate of import duty from 7½ to 11 per cent from 1st March 1921 still remains to be seen

The following table compares the values of the chief imports during each of the past three years, with the values recorded during 1913-14, the last pre-war year .—

	1913-14 (pre-war year).	1918-19	1919-20	1920-21
	Rs. (lakhs).	Rs. (lakhs)	Rs (lakhs)	Rs. (lakhs).
Cotton goods	62,14	51,68	54,72	88,54
„ twist and yarn	4,16	8,87	4,36	13,58
Iron and steel	16,01	12,15	16,33	31,30
Machinery of all kinds, including belting	8,26	5,86	9,58	24,09
Railway plant and rolling stock	10,03	1,04	4,59	14,13
Sugar	14,96	15,61	22,99	18,50
Motor cars and motor cycles	1,53	39	3,93	12,34
Hardware	3,95	3,21	4,37	9,08
Mineral oil	4,12	3,61	9,26	8,34
Paper and pasteboard	1,59	2,72,	2,34	7,30
Silk, raw and manufactured	4,37	4,75	7,71	7,26
Chemicals, drugs, etc.	2,41	4,22	3,74	5,16
Liquors	2,24	3,30	3,37	4,90
Provisions	2,47	1,94	2,91	3,61
Salt	88	2,33	2,10	-2,28

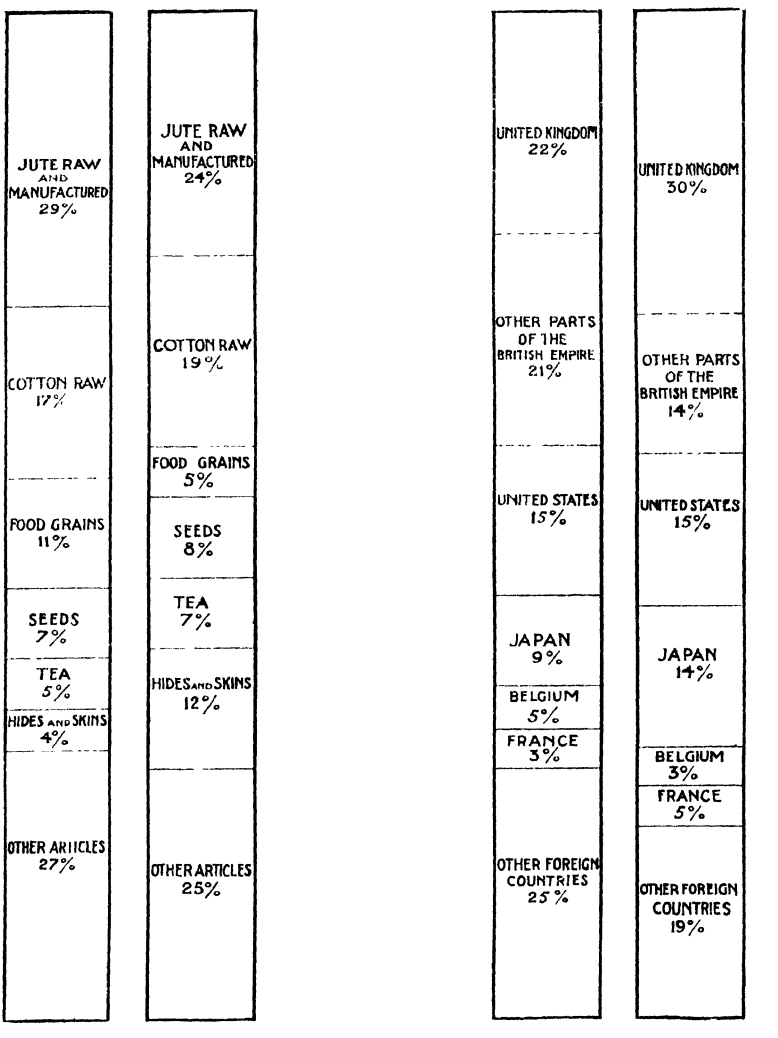
EXPORTS.

As already shown, 1919-20 was a year of records. The combined trade of that year, imports, exports and re-exports, had amounted to Rs. 534¾ crores, a total never before attained. Exports and re-exports had together reached a total value of Rs. 326¾ crores, also a record for one year. Including movements of bullion, official remittance and rupee paper on private account, there had been a record balance of trade of Rs. 95 crores in India's favour. Finally, the last month of that year, March 1920, had registered a new record in the value of one month's exports of Indian merchandise which had totalled Rs. 30 crores.

The volume of exports declined steadily from that month to Rs. 27 crores in April 1920, the first month of the year under review, Rs. 20½ crores in September and Rs. 17 crores in March 1921. Total exports for the year at Rs. 238 crores were less even than during the last pre-war year (1913-14, Rs. 244 crores) in spite of the higher level of prices. The reasons are not far to seek. The general cost of living, wages and costs of production rose, reducing margins of profit. The monsoon was short and official control of the export of foodgrains, a considerable item in India's foreign trade, had to be retained. Foreign countries in a position to buy had bought to excess and countries starved of

EXPORTS.

Share of the Principal Articles and Countries in the Export Trade of British India in 1920-21, as compared with the year 1919-20.



goods had not sufficient exchange strength to place orders. Such orders as were forthcoming contracted from a forward to a spot basis. Stocks in India rose. The slump was general and acute.

The slump itself was a natural and not unhealthy reaction from the frenzied buying which had followed the redistribution of wealth during the war, and the subsequent reorganisation of industries in the comparative security of peace conditions. Indian produce and manufactures had been in keen demand, but it yet remains to be seen to what extent they had passed into consumption or had merely accumulated in foreign markets. The conditions naturally varied with the commodity. All that can be said with safety is that the climax occurred during January-February 1920, when prices and exchange reached their highest levels, and that foreign orders diminished rapidly thereafter. Subsequent purchases were made from hand to mouth, on falling prices, freights and exchange, and behind stocks which could only be liquidated at a loss. An important factor was the weakness of the monsoon of 1920, necessitating the retention of official control of exports of wheat and rice within specified limits of quantity and price. The exports of other food grains and flour were also kept under control. The practical effect of these orders was to restrict foreign dealings in what are normally important items of India's export trade, and to keep the prices at levels reasonable to both producer and consumer in India.

A factor of considerable importance to the export trade was the steady decline in the sterling value of the rupee from 2*s*-4*d* on the 1st April 1920 to 1*s*.-3 *d* on the 31st March 1921; that is to say, conversely, the appreciation of the rupee value of sterling from approximately Rs. 8-9-0 to approximately Rs. 15 per £. The effect of this tendency was naturally to modify the decline in rupee prices, which did not in general show so violent a fall in India as the corresponding rates expressed, in foreign currency, in foreign markets. The decline in freight rates was a contributing factor. The effect on India's export trade varied considerably with the commodities handled, and especially with the conditions of payment. On the whole, although Indian prices declined more gradually (owing to declining exchange) than prices in foreign markets, her export trade was severely hit, since steady forward business had been rendered impracticable.

An interesting feature of the year's trade is that the wide margins of price between superior and inferior qualities of the same classes of goods—characteristic of the war period—were generally maintained. This tendency was due to several causes.

DIRECTION OF TRADE.

A noteworthy feature in the direction of India's trade in 1920-21 was an increase in the share of the British Empire in the total trade as compared with the preceding year, from 51 to 56 per cent, with a corresponding decrease in the share of foreign countries from 49 to 44 per cent. The important variations as compared with 1919-20 are stated below:—

(1) A remarkable increase in the percentage share of the United Kingdom in imports from 50.5 to 61 per cent accompanied by a decrease in exports from 29·6 to 21·9 per cent, resulting in a net increase in the total trade from 37.7 to 44.1 per cent. In the pre-war year 1913-14 the shares were 64 per cent in imports, 24 per cent, in exports, and 40.7 per cent. in the total trade.

(2) A decrease in the share of His Majesty's Dominions and other British possessions in imports from 10 to 5 per cent with an increase in their share in the export trade from 14 to 21 per cent, the net result being a decrease in the total trade fom 13 to 12 per cent.

(3) The whole British Empire had 56 per cent. of the total trade (66 per cent. of the imports and 43 per cent of the exports) as against 51 per cent. (61 per cent. of the imports and 44 per cent. of the exports) in 1919-20.

(4) A decrease in the share of the United States of America in imports from 12.1 to 10.5 per cent, although in exports her position remained practically unchanged, namely nearly 15 per cent. thus recording a net decrease in the total trade from 13.8 to 12.4 per cent.

(5) An all-round decrease in Japan's share in the trade, namely, under imports from 9.2 to 7.9 per cent. and under exports from 14·3 to 9.5 per cent. resulting in a net decrease in her share in the total trade from 12.3 to 8.6 per cent.

DIVISION BETWEEN COUNTRIES.

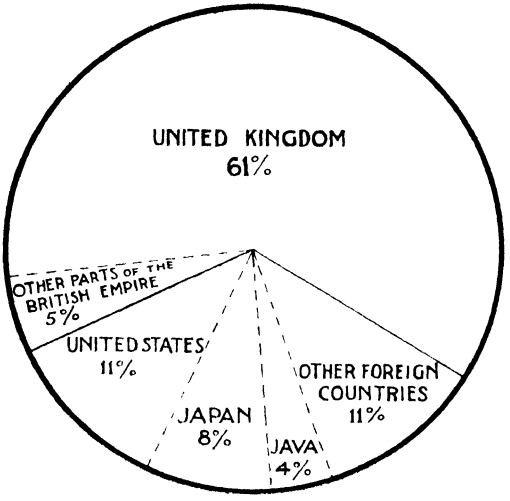
Imports from the United Kingdom showed an increase in value of no less than Rs. 100 crores or 95 per cent to Rs. 205 crores. In the pre-war year the value had amounted to Rs. 117½ crores only. The value of the exports to the United Kingdom decreased by 42 per cent, to Rs. 56 crores as compared with 1919-20, the value recorded in the pre-war year being Rs. 58 crores. Nearly 40 per cent. of the total imports consisted of cotton manufactures including twist and yarn, which were valued at Rs. 81 crores as against Rs. 51 crores or 48 per cent. of the imports in the preceding year, The other important groups, namely, metals and manufactures, machinery, railway plant and rolling stock, accounted for 29 per cent. or nearly one-third of the total imports as against 23 per cent. in 1919-20.

The quantity of cotton piecegoods imported rose by 32 per cent. to 1,292 million yards from 976 million in 1919-20, but this was 58 per cent. below the imports in the pre-war year. The value of the imports of iron and steel more than doubled from Rs. 10 crores to Rs. 22 crores, of machinery and millwork nearly trebled from Rs.6 crores to Rs. 17½ crores, while railway plant and

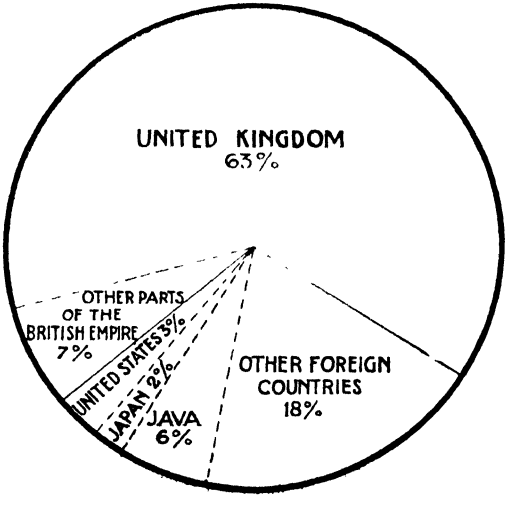
SOURCES OF IMPORTS.

Share of Principal Countries in the Import Trade of British India in 1920-21 as compared with the Average of the five pre-war years, 1909-10 to 1913-14.

1920-21



1909-10 to 1913-14
(Pre-war Average)



rolling stock increased from Rs. 4 crores to Rs. 13 crores, and hardware and liquors amounted to Rs. 5 and Rs. 3¾ crores as against Rs. 2 crores each in 1919-20. Other articles which showed noticeable increases were paper and pasteboard (+Rs. 2,25 lakhs), woollen goods (+Rs. 3,39 lakhs), electrical instruments (+Rs. 2,09 lakhs), mixed or yellow metal for sheathing (+Rs. 1,34 lakhs), motor cars (+Rs. 1,86 lakhs), provisions (+Rs. 64 lakhs), haberdashery and millinery (+Rs 84 lakhs), stationery (+Rs. 80 lakhs), cement (+Rs. 56 lakhs), paints and colours (+Rs 53 lakhs), and leather (+Rs. 70 lakhs).

The principal articles exported were tea, (over Rs. 10 crores), raw and manufactured jute (nearly Rs. 10 crores), seeds (Rs. 7 crores) food grains (Rs. 4½ crores), raw and tanned hides and skins (Rs. 3½ crores), and raw wool and raw cotton (about Rs. 2 crores each). These articles represented 70 per cent. of the total exports to the United Kingdom as against nearly 80 per cent. in 1919-20. The shipments of tea decreased by 26 per cent. as compared with 1919-20 to 249 million lbs. Raw jute declined by no less than 56 per cent to 136,000 tons, while jute bags and gunny cloth were exported to the extent of 48 millions in number and 94½ million yards, respectively, as against 58 millions in number and 100 million yards in the preceding year. The total quantity of all kinds of seeds exported was 286,000 tons, showing a decrease of 217,000 tons or 43 per cent. as compared with 1919-20. Cotton seeds accounted for a decrease of 146,000 tons, linseed of 32,000 tons, and rapeseed of 49,000 tons, while groundnuts increased by 15,700 tons. There was a remarkable fall in raw hides and skins. The quantity of raw hides and skins amounted to 5,800 tons and of tanned hides and skins to 5,300 tons as against 18,800 and 25,900 tons, respectively, in 1919-20. Food grains mainly rice and wheat, had been conditionally released for export and showed an increase of 170,000 tons to 279,000 tons. Shipments of rubber, coffee, bones, and manganese ore improved, while there were decreases under raw cotton, shellac, fodder, bran and pollards, coir manufactured, mica, paraffin, wax, tobacco, cocoanut oil and teak wood.

As regards other British Possessions the total imports fell by Rs 2 crores to Rs. 18 crores, while the exports rose from Rs. 47 crores to Rs. 54 crores or an increase of 15 per cent.

As compared with the pre-war year 1913-14, the value of the imports from almost all the Continental countries increased with the exception of Germany and Austria Under exports there was a marked decrease in the case of France, Italy, Germany, Austria, Sweden and the Netherlands, accompanied by an increase in the trade with Belgium, Norway, Spain and Switzerland How much of the increase in the imports from Belgium and the Netherlands is due to the transit of goods from Germany, it is not possible to estimate, but the proportion is probably high. Imports from the United States of America increased and exports thereto declined. Imports from Java fell and there was a decrease in the exports to China and Japan. As in the preceding year, the United States occupied the second place in India's foreign trade in 1920-21.

The most interesting feature of India's foreign trade was the revival of the trade with Continental countries, especially Germany and Belgium. The value of the total trade with Germany increased to Rs. 13½ crores as against Rs. 1½ crores in 1919-20, although this is only about one-third of the pre-war level. Imports were valued at Rs. 4¾ crores, consisting mostly of alizarine and aniline dyes (Rs. 1,17 lakhs), iron and steel (Rs 57 lakhs), salt (Rs. 35 lakhs), glass and glassware (Rs. 20 lakhs), paper and pasteboard (Rs. 19 lakhs), machinery and millwork (Rs. 17 lakhs), and cotton manufacturers (Rs. 9 lakhs). The value of exports amounted to Rs. 8¾ crores, of which raw cotton accounted for Rs. 3½ crores and raw jute Rs. 2¼ crores. Rice, not in the husk, was exported to the extent of about 51,000 tons, valued at Rs. 79 lakhs. Before the close of the year the export trade in raw hides with Germany showed signs of revival.

CUSTOMS REVENUE

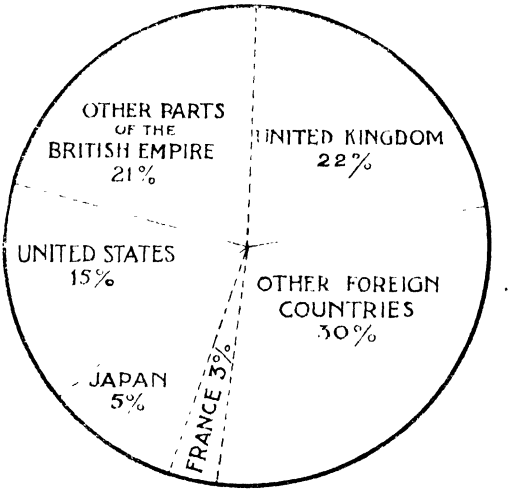
The chief event of the year was the amendment of the second Schedule to the Indian Tariff Act, 1894, which was embodied in the Indian Finance Act, 1921, and took effect from 1st March, 1921. The general *ad valorem* tariff rate on imported articles, which had stood at 7½ per cent. since March 1916, was raised to 11 per cent. A specific rate of duty of 12 annas per gross of boxes, in place of the previous 7½ per cent. *ad valorem* duty, was imposed on matches; and a duty of 20 per cent. was levied on certain articles of luxury such as confectionery, motor cars motor cycles and pneumatic rubber tyres (excluding lorries), silk piece-goods, fireworks, clocks and watches, electroplated ware, gold and silver plate, musical instruments, cinematograph films, toys, etc The special rates of duty on imported liquors, foreign sugar, and tobacco other than unmanufactured tobacco were increased; cotton machinery, hitherto free was brought under the 2½ per cent. rate, and metallic ores of all sorts were made free. By Notification the imports of grain, pulse and flour were exempted from duty throughout the year. The revised rates were in force for only one month of the year under review, namely, March 1921.

The gross sea and land customs revenue (excluding salt revenue) collected during the year under review reached the unprecedented level of Rs. 31,88 lakhs, an increase of no less than Rs. 9,40 lakhs or 42 per cent. over the preceding year and of Rs. 20,54 lakhs or 181 per cent. over the pre-war year 1913-14. To the total customs revenue realised during the year, import duties contributed Rs. 23,08 lakhs or 72 per cent. export duties Rs. 4,83 lakhs or 15 per cent. the excise duty on cotton manufactures Rs. 2,35 lakhs or 7 per cent. and that on motor spirit Rs. 54 lakhs or 2 per cent.; land customs and miscellaneous yielded approximately

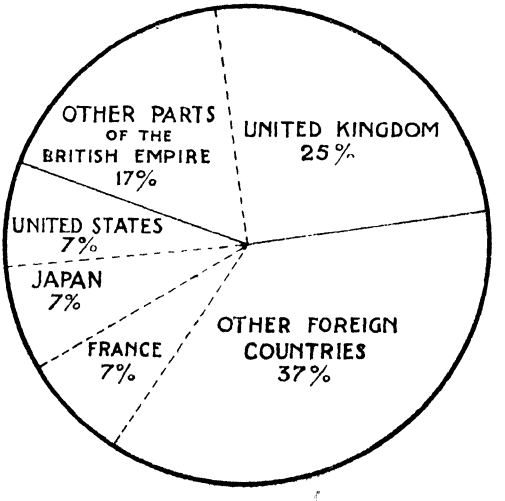
DESTINATIONS OF EXPORTS.

Share of Principal Countries in the Export Trade of British India in 1920-21, as Compared with the Average of the five pre-war years, 1909-10 to 1913-14.

1920-21



1909-10 to 1913-14 (Pre-war Average)



Rs. 1,08 lakhs or 4 per cent. Under imports the most noticeable increases were in cotton goods (+Rs. 2,60 lakhs), carriages and carts, including motor cars and cycles (+Rs. 77 lakhs), liquors (+Rs. 50 lakhs), hardware and cutlery, and paper (+Rs. 47 lakhs each), tobacco (+Rs. 42 lakhs), machinery (+Rs. 34 lakhs), instruments and woollens (+Rs. 27 lakhs each), iron and steel (+Rs. 21 lakhs), and railway plant (+Rs. 20 lakhs). On the other hand, petroleum showed a decrease of Rs. 31 lakhs and sugar of Rs. 19 lakhs.

SHIPPING.

As to the nationality, number, and tonnage of vessels which entered and cleared at ports in British India, the total net register tonnage of vessels including native craft was 15,473,000 tons in the year under review as against 13,000,000 tons in 1919-20 and 17,386,000 tons in the pre-war year 1913-14. This showed an increase of 19 per cent over the preceding year, although still 11 per cent. below the pre-war year. Of the total tonnage entered and cleared during the year 15,191,000 tons or 98 per cent. were accounted for steamers and 282,000 tons or only 2 per cent. by sailing vessels (Indian and foreign). The number of vessels that entered and cleared with cargoes and in ballast increased to 8,503 from 8,228 in 1919-20. Of these, the number of steamers was 5,886 against 5,195, sailing vessels 7256 against 601, and native craft 1,891 against 2,432. The average tonnage per steamer was 2,531 as gainst 2,440 in the preceding year and 2,683 in the pre-war year. The clearances of vessels with cargoes and in ballast engaged in overseas trade are shown in the following statement :—

Tonnage clearances with cargoes and in ballast.

	1913-14 (pre-war year).		1919-20		1920-21	
	Tons (1,000).	Per cent.	Tons (1,000)	Per cent.	Tons (1,000).	Per cent.
British ships (including British Indian) .	6,679	(76)	5,435	(84)	5,935	(80)
Foreign ships	2,083	(24)	1,067	(16)	1,492	(20)
TOTAL .	8,762	(100)	6,502	(100)	7,427	(100)

The share of British ships decreased to 80 per cent. from 84 per cent. in 1919-20, while that of foreign ships had a corresponding increase to 20 per cent. from 16 per cent. As compared with the pre-war year 1913-14, however, the share of British ships rose in 1920-21 by 4 per cent. and that of foreign ships fell to the same extent. The total clearances showed an increase of 14 per cent. over the preceding year. These figures do not take into account Government vessels or vessels chartered on Government account.

The tonnage of vessels cleared with cargoes and in ballast to the United Kingdom was 1,454,000 tons, a decrease of 24 per cent. as compared with 1919-20 and of 23 per cent. as compared with 1913-14. There was an increase in the clearances to Japan and the United States while Egypt showed a fall. The percentage share of Bengal in the total tonnage of entries and clearances was 32 against 23 in the pre-war year 1913-14, of Bombay 27 against 24, of Sind 11 against 12, of Madras 16 against 25, and of Burma 14 against 16.

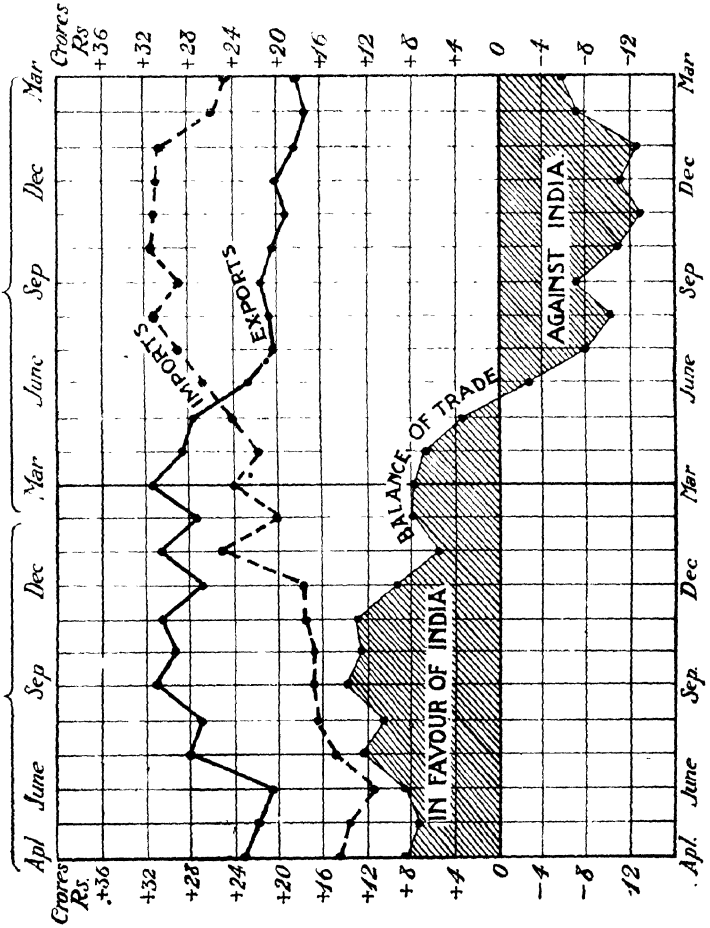
THE BALANCE OF TRADE.

The outstanding feature of the year's trade was the excess of imports over exports of private merchandise by over Rs. 79 crores. In the preceding year exports had exceeded imports in value by Rs. 126 crores and in 1918-19 by nearly Rs. 85 crores. In the first two months of the year under review exports held their own, but imports were fast gaining on them and the favourable margin of Rs. 7 crores in April 1920 was reduced to Rs. 4 crores in May, and was converted to an adverse balance of Rs. 3 crores in June. From that month the adverse balance continued to the end of the year, the highest figures recorded being Rs. 13 crores in November, 1920, Rs. 12 crores in December, 1920, and again Rs. 13 crores in January, 1921.

Another feature of the year was a net export of treasure on private account, valued at Rs. 1½ crores as against a net import of Rs. 11 crores in 1919-20 and of Rs. 29½ crores in the pre-war year.

India was successful in buying the greater part of her silver requirements cheap and in exporting her gold when it was dear. In the end, the demand for silver outweighed the propensity to hoard gold, and gold exports, facilitated by low exchange levels, ultimately exceeded the imports of silver. Rupee-sterling exchange may be described as having responded to the general influence exercised first by a rising and then by a declining balance of trade. Subject to this dominant influence it felt the attraction exerted by the world price of silver. And finally, during the last half of 1920-21 it fluctuated from day to day, on its downward career, between the point at which it was profitable to import silver and that at which it paid to export gold, the margin of profit being influenced by fluctuations in the value of £1 in terms of dollars, or the "crossrate" as it is popularly termed.

Imports, Exports, and Balance of Trade in India (Private Merchandise only).



A special feature of the later years of the war, and of subsequent years also, was the insistence of Exchange Banks in India on the production of cover, at first as a condition to financing export trade, and later (when the balance turned) to financing imports. The insistence on cover for export bills during 1917 and 1918 encouraged export firms to take up import business in order that they might be able to provide the necessary cover themselves, and thus avoid the premium demanded for cover in the open market. This development stimulated the demand for foreign goods, and the imports business, once engaged, was retained by many firms and helped to swell the volume of orders for foreign goods during 1920.

A second point of importance is the undoubted remittance (on favourable exchange rates during 1919-20) of funds earmarked for the purchase of goods from abroad, and particularly of machinery and plant. The later months of 1919 and the earlier months of 1920 saw many successful appeals to the public for funds to finance industrial enterprise in India. These funds were remitted, in many instances, while exchange was high, to finance plant and machinery, which on delivery during 1920-21, had thus already been paid for. That is to say, the effect on exchange of an unknown, but perhaps appreciable, proportion of the imports of 1920-21 had already spent itself in 1919-20.

Conversely, contracts for the purchase of piece-goods, provisions, hardware and other commodities, representing expenditure from the income rather than the capital of India, were in many instances repudiated, pending the recovery of the sterling value of the rupee. The total value of such "cold-storage" bills has been estimated on good authority, towards the end of March 1921, at Rs 30 crores for piece-goods and Rs. 20 crores for other commodities of this class. That is to say, accounts to the extent of Rs. 50 crores still remained to be settled on 1st April 1921, for goods which figure in the import trade of 1920-21.

TRADE OF INDIA, 1921.

During the eight months ended November, 1921, as compared with the corresponding period of 1920, the value of the imports decreased by Rs. 49 crores or 22 per cent. to Rs. 174 crores, and the total exports, including re-exports, decreased by Rs. 33 crores or 18 per cent. to Rs. 149 crores. The exports of Indian Merchandise showed a decrease of Rs. 28 crores or 17 per cent. and re-exports decreased by Rs. 4 crores or 33 per cent. The grand total of imports, exports, and re-exports amounted to Rs. 323 crores, as against Rs. 405 crores, a decrease of Rs. 82 crores or 20 per cent.

Imports of treasure (private and Government) decreased by nearly Rs. 6,82 lakhs to Rs. 18,38 lakhs. Gold bullion fell by Rs. 14,17 lakhs to Rs. 2,22 lakhs, and sovereigns and other British gold coin by Rs. 1,48 lakhs to Rs. 1,72 lakhs, while other coined gold rose by nearly Rs. 3,10 lakhs to Rs. 3,89 lakhs. Imports of silver increased by Rs. 5,74 lakhs to nearly Rs. 10,55 lakhs. Exports of treasure also increased by Rs. 11,08 lakhs to Rs. 18,53 lakhs.

Balance of Trade.—India's balance of trade during the eight months, April to November, 1919, 1920 and 1921, is shown in the following table :—

	Eight Months, April to November.		
	1919	1920	1921
	Rs. (lakhs)	Rs. (lakhs)	Rs. (lakhs)
Exports of Indian merchandise (private) .. .	1,97,67	1,68,36	1,39,92
Exports of Foreign merchandise (re-exports) .. .	12,31	13,46	9,05
Imports of Foreign merchandise (private) . .	1,21,96	2,23,02	1,74,22
Net exports of merchandise (private) .	88,02	—41,20(*a*)	—25,25(*a*)
Net imports of gold (private) .	2,29	5,57	—8,56(*b*)
Net imports of silver (private) ..	- 1(*b*)	1,64	8,46
Net imports of treasure (private) ..	2,28	7,21	—10(*b*)
Council Bills and telegraphic transfers paid in India .	25,84	..	..
Telegraphic Transfers from the Bank of Montreal paid in India.	2,26	..	..
Sterling Bills on London sold in India .. .	20	28,55	..
Enfaced Rupee paper (net imports) .. .	60	53	—1,42
Interest on Enfaced Rupee paper .. .	18	14	15
Balance of trade in favour of India ..	57,06	....	....
Balance of trade against India ..	....	20,53	23,88

It will be seen from the above table that the balance of trade, so far as shown by the statistics of merchandise, treasure, Council Bills, and Enfaced Rupee paper, was against India to the extent of Rs. 23,88 lakhs in the eight months ended November, 1921, as compared with Rs. 20,53 lakhs against, and Rs. 57,06 lakhs in favour of, India in the corresponding period of 1920 and 1919, respectively.

(*a*) Net imports. (*b*) Net exports.

INDIAN FISCAL COMMISSION.

The Government of India in October, 1921, appointed a Commission of officials and non-officials with the following terms of reference :—"To examine with reference to all the interests concerned the tariff policy of the Government of India, including the question of the desirability of adopting the principle of Imperial preference, and to make recommendations."

The personnel of the Commission was nominated as follows :—President, Sir Ibrahim Rahimtulla, Kt.; Vice-President, Mr. J. M Keynes; Members : Mr. Seshagiri Ayyar, M L.A., Mr Ghaneshyamdas Birla, Mr. J. C Coyajee, Sir Maneckjee Dadabhoy, M C.S., Mr Jamnadas Dwarkadas, M.L.A., Sir Edgar Holberton, M.L.A., Mr. R. A Mant, I.C.S., Mr. Narottam Morarji, Mr C. W. Rhodes, M.L.A., and Sir M. De P. Webb, M.L.A., Mr. H G. Haig, I C.S., was officially appointed secretary and Mr. F. F. Rogers, assistant secretary.

The Commission held its initial meetings, to discuss preliminaries, in Bombay, in mid-November and began hearing evidence on 26th November, at Karachi. Its tour through India and Burma will terminate at Delhi on 8th March. Before the meeting of the commission an elaborate questionnaire in connection with it was issued to any who cared to apply for it and the invitation to associations and individuals to give evidence was couched in the widest terms.

THE SUGAR COMMITTEE.

The Report of the Indian Sugar Committee appointed by the Government of India in October 1919, to investigate the possibility of organizing and developing the sugar industry in India was published in August, 1921. The Committee as orginally constituted consisted of Mr. J. Mackenna, C I E, I C S, Agricultural Adviser to the Government of India, President; Mr. F Noyce, C B.E, I C.S, Vice-President; Mr. J W. Macdonald, Managing Director of Messrs Henry Tate and Sons, the well-known sugar refiners of London, Mr. W W. Craib, late Sugar Planter of Demerara and Cuba, Sir Frank Carter, C I.E., C B.E., of Messrs Turner, Morrison and Company, Calcutta, Sardar Jogendra Singh, Taluqdar of Oudh, Mr B. J Padshah of Messrs Tata Sons and Company, Bombay, and Mr. Wynne Sayer of the Indian Agricultural Service, with Mr. A. E Gilliat, I C.S., as Secretary. On Mr. Mackenna's resignation in April, 1920, Mr Noyce succeeded him as President and Mr. G Clarke, Agricultural Chemist, United Provinces, was appointed to the Committee.

In the introductory chapter to the Report, the considerations which led to the appointment of the Committee are emphasized. These were the very low production of sugar to the acre in India as compared with the other great cane growing countries of the world and the dependence of the country on foreign supplies to supplement its own outturn. It is pointed out that the average production of sugar to the acre in India, is only 1·07 tons against 1·96 tons in Cuba, 4·12 tons in Java and 4·61 tons in Hawaii. The comparison is even less favourable to India, if it is remembered that 99 per cent. of the sugar produced in India is in the form of "gur" which is in reality a sweetmeat and yields not more than 50 per cent. of refined sugar, whilst the cane sugar from other countries yields on the average 90 per cent. the residue in each case consisting of molasses and waste. In actual sugar, therefore, India's production per acre is less than one-third that of Cuba, one-sixth that of Java and one-seventh that of Hawaii. In spite of its 2¾ million acres under sugar, seven times the acreage of Java, the imports of sugar during the four pre-war years, averaged 724,000 tons, valued at Rs. 12·71 crores and during the four war years 532,000 tons, valued at Rs. 13·43 crores The bulk of this came from Java.

Java Sugar.—Chapter II of the Report is devoted to an examination of the causes which have secured for the sugar industry in Java its present strong position. The first of these is the scientific work carried out by the Research Station Association of the Java Sugar Industry at Passarocan and Semarang and its staff of advisers of groups of factories This work is not subsidised in any way by the Government of the Netherlands Indies, the funds for it, some Rs. 12 lakhs annually, being provided by the industry itself The second is the system of leasing land from the Javanese landholders, which gives the factories entire agricultural control over it and enables cultivation to be carried out in a thoroughly efficient manner. The third is the up-to-date character of the factories

Possible Increases.—The Report proper is divided into three parts, one devoted to problems of agriculture and irrigation, one to manufacturing questions and one to questions of organization In Part I the prospects of increasing both the area under cane and the yield per acre are examined province by province. It is only in Burma and Assam that the Committee see any hope of a material extension of the area under unirrigated cane. In both provinces, though the area under cane is at present small, the climatic advantages are great, as is shown by the excellent thick canes which are already grown, and large areas of waste land are available for capitalist grants. For both provinces, the Committee recommend the appointment of a committee of three selected officers to explore likely areas and to suggest suitable sites for research stations. In Burma, the outlook for popularising cane growing among small cultivators is considered promising but in Assam their indolence and inefficiency and the scattered nature of their cane cultivation render any extension except through the development of a factory industry improbable. Bengal is ruled out as a likely field for expansion for various reasons, the most important being the competition of jute. Outside the provinces mentioned and North Bihar, cane can seldom be grown successfully without irrigation and the

extension of cane cultivation must therefore depend very largely on the provision of additional irrigation facilities. In the United Provinces, which already contribute nearly half the cane growing area of India, the execution of the Sarda Canal Project should add another 100,000 acres. In the Punjab, which stands second, although the short monsoon period and the extremes of temperature will always be a serious handicap to an extension of cane, the lower costs of cultivation compensate for lower yields as compared with tropical India. A considerable expansion of the cane area may therefore be looked for under both old and new canals, given the stimulus of high prices, and it is recommended that the possibilities of the tracts to be opened up by the new canals projected should be tested by the grant of land for the cultivation of improved canes by intensive methods on the lines of the grants already made for growing improved varieties of cotton. In Bihar the prospects of cane in the Sone canal area are considered excellent provided the tract can be drained and a drainage survey is recommended. In Bombay, an ultimate area of 150,000 acres under excellent cane, five times the present acreage, is anticipated but a remedy must be found for the difficulty arising from waterlogging and recommendations are made with a view to this end. The outlook for cane in Mysore is specially favourable provided irrigation supplies can be concentrated. Prospects of extension in Madras, in spite of its tropical advantages are not hopeful owing to the ingrained preference of the cultivator for rice, unless a factory industry growing its own cane on leased land develops nor, except under wells, are they any better in the Central Provinces, the policy of the Local Government being to ensure that its irrigation supplies are used for food grains. In the Central Provinces, the United Provinces, the Punjab and Bombay, much can be done to promote cane growing under wells and it is recommended that the Agricultural Engineering Department in these provinces should be strengthened for the purpose of dealing with well boring and pumping installations.

Improvements.—The two great means of securing an improvement in yield are the introduction of better varieties and the adoption of improved methods of cultivation. The agricultural practices and the varieties of cane grown in the different provinces are so widely diversified that it is impossible to do more than give the barest indication of the recommendations made in the Report in regard to them. In the United Provinces, it is held that the enhancement of yield to be obtained by applying improved methods of cultivation to the local thin and medium canes, though limited, is appreciable and that improvement in this direction is likely to be more rapid than in the direction of introducing better varieties. Superior thick and medium varieties must, however, be introduced if the Provinces are to contribute materially towards the solution of the cane problems of India and the feasibility of introducing them has already been demonstrated at Shahjehanpur. In Bihar, improvements in agricultural practice and consequently in yield can for the present only be looked for in North Bihar where the great need of the European planters is improved varieties responding to intensive cultivation. When this need is met, a beginning may be made in introducing the improved varieties and methods to the small cultivator. In Bombay, the problem on the Deccan canals is the reduction of the high costs of cultivation and extensive propaganda to demonstrate the value of the work already done at Manjri is recommended. In all provinces except Bengal, the Central Provinces and the North West Frontier Province, it is proposed that research stations working under an Imperial Research Institute should be established solely for work on cane. In the excepted provinces, there is not at present sufficient justification for separate cane research stations and cane work would remain in the hands of the local Agricultural Department.

Manures.—The Committee regard the provision of a cheap supply of nitrogenous fertilizers as the most important of the general agricultural problems relating to cane and indeed as the most insistent problem of Indian agriculture. An investigation of the possibilities of utilizing the power from hydro-electric schemes in India for the fixation of nitrogen by the cyanamide and other processes is therefore recommended. Deeper ploughing is the first essential for improved cane cultivation and the introduction or power plants for crushing cane, threshing and pumping would enable better ploughs to be used as it would reduce the strain on the bullocks. On large estates, cane cultivation with steam tackle will be found both effective and economical whilst on smaller estates there is great scope for the use of motor tractors. The most important work of the Agricultural Department is the demonstration of improved agricultural methods and the spread of better implements and even outside the areas for which in the provincial chapters a special demonstration staff has been recommended for work on cane, it is suggested that a staff should be similarly organised for general work and given instruction at the cane research stations. It is insisted that demonstration should be carried out on the cultivators' own fields. One of the great obstacles to the extension of cane cultivation is its high cost and the lack of capital to meet it. The co-operative movement must contribute to remove this and must make advances to cane growers on a more liberal scale and for longer periods than to growers of other crops. Factories should make advances to cane growers through their co-operative societies whenever this is possible.

Non-Cane Sugars.—As regards possible sources of sugar supply other than cane, the Committee are not hopeful of any extension of the palmyra sugar industry which is handicapped in South India by shortage of tappers and in Upper Burma by shortage of fuel. They consider that there are great possibilities of improving the yield and quality of the gur made from the juice of the date palm in Eastern Bengal and recommend that the investigations already carried out on this question should be prosecuted to a conclusion, before any attempt is made to develop other date palm areas. It is only in the North West Frontier Province and the Punjab that beet sugar offers any prospects and there further experiment is necessary under more diversified agricultural conditions and closer chemical supervision. The Peshawar Valley

in the former province seems to offer a unique opportunity for a combined cane and sugar factory.

Manufacture.—Part II of the Report which discusses manufacturing questions opens with a statement of the problem which is how to reduce the loss or inversion of 34 per cent. of the sucrose in the cane which takes place in the manufacture of gur and of 29 per cent. which takes place in the manufacture of sugar in India as compared with the results obtained in up-to-date factories in other countries. It has to be decided by what lines of improvement these losses can be most materially reduced. The most hopeful are the introduction of less costly and more efficient methods of making gur on a small scale and an extension of the manufacture of sugar direct from cane in large factories combined with improvements in the processes followed. The direct manufacture of white sugar in small factories is condemned on the ground of high cost of production, heavy losses of crystalline sugar and the unduly high proportion of molasses. The refining of gur in large factories is considered to have no future before it on account of the low quality of the raw material and the heavy losses inevitable with the combination of processes by which the sugar is manufactured which renders the industry incapable of withstanding efficient competition from factories making sugar direct from cane in normal times. An investigation into the possibilities of manufacturing gur in large factories, of manufacturing muscovado sugar or other intermediate product direct from cane in small factories and of introducing the manufacture of white sugar from muscovado sugar or other intermediate product in large factories is recommended but the Committee consider the prospects in these directions very limited.

Gur.—It is held that the first essential for the improvement of the manufacture of gur which represents 99 per cent. of the total quantity of cane sugar at present produced in India is the substitution of small power plants for the bullock mill, the proper adjustment and working of which are rendered impossible by the strain involved on the bullocks. It is therefore recommended that the Agricultural Engineering Department of each province should endeavour to evolve a standard design of power plant suited to the local canes and capable of crushing one and two tons of cane an hour respectively. All the improved furnaces so far designed are considered defective in the arrangement of the pans and the incomplete combustion of the gases. A plan of a furnace designed to remove these defects is attached to the Report.

Cane Supplies:—The smallness and inefficiency of the Indian sugar factories are attributed mainly to their difficulties in obtaining adequate supplies of cane. None of the factories in India works up to its full capacity and half of them only crush half the cane their mills could deal with. The problem for solution is therefore to concentrate the area on which the factories draw for their cane and to ensure supplies at the right time. The grant of Government waste land to factories which is strongly recommended offers only a partial remedy as suitable lands are only available in Assam and Burma and to a problematical extent on canals which have yet to be constructed in the Punjab. Whilst it is admitted that the compulsory acquisition of land by Govt. and its subsequent lease to factories would be the easiest and speediest way of overcoming the difficulty, the Committee, with the exception of Mr. Padshah, are opposed on principle to such acquisition except in certain restricted cases such as the acquisition of small blocks as centres of demonstration and seed supply and for the installation of tube wells and pumping plants. They hold that the better way in the true interests of all concerned is greater efforts on the part of factories, in which they should receive assistance from Government officers, to obtain land on lease on the Java model, the grant to cane growers on suitable terms of shares in a factory or participation in its profits and, above all, the payment to growers for their cane on an adequate scale. The scale recommended is one based on a price for cane equal to one half the price of the sugar produced from it. Several suggestions for new railway lines in North Bihar and elsewhere which would be of great benefit to the factory industry are mentioned. The licensing of factories by Government, *i.e*, the grant to factories of a practical monopoly of working in a particular area is not recommended, except by Messrs. Padshah and Sayer, as it is held that no efficient factory paying full value for cane and entering into close relations with the cultivators in its neighbourhood need fear competition whilst the possibility of competition is a valuable stimulus to efficiency. Inside the factory, the adoption of various mechanical improvements such as the Java system of lifting cane loads bodily on to the carrier and of a mill consisting of two crushers in front of a train of three three-roller mills with two macerations is suggested. The need for better supervision and above all for more efficient chemical control is insisted on and a system of chemical and analytical records which will enable all losses to be traced is formulated. The committee admit that many of their conclusions regarding the prospect of sugar production by factory methods in Upper India are speculative and that unless initiative is forthcoming, capital is likely to concentrate in new and undeveloped areas such as Burma and Assam to the neglect of the great cane growing tracts of Upper India. They therefore recommend that, in order that the possibilities of these tracts may be properly explored, Government should erect a pioneer factory in Upper India outside the present factory zone—the Karnal or Rohtak district of the Punjab is suggested as a suitable locality—and that this should be run on purely commercial lines by a directorate of five, a managing director, the Director of the Sugar Research Institute, another official nominated by Government and two non-officials nominated by the Sugar Board, the managing director and the factory staff being recruited on special terms and allowed to participate in profits.

A Sugar Board.—This brings the Committee to questions of organization which are dealt with in Part III of the Report. They hold that the organization of the sugar industry on the Java model adapted to suit the needs

of India is essential to progress. Such an organization must be largely official at the outset but the object should be to hand it over almost entirely to non-official control at as early a stage as possible. It should take the form of an Indian Sugar Board with five official and six non-official members. In the first instance, all the members would have to be nominated by Government but the first duty of the Board should be to evolve a scheme to secure representative appointments. Simultaneously with the establishment of the Board should be that of an Imperial Research Institute with three divisions, agricultural, chemical and engineering, which should control the work on the research stations proposed for the provinces as well as that on the cane-breeding station at Coimbatore, the excellent work in progress at which should be continued on its present lines except that the attempt to evolve improved varieties of cane for Upper India which will withstand the indifferent usage of the ordinary canegrower should be abandoned as impracticable. The functions of the Sugar Board would be to control the policy of the Research Institute and the administration of its funds, to advise Government on all matters affecting the sugar industry and to supervise the issue and receipt of returns by the Research Institute. The cost of the Board would be negligible as membership would be honorary. As regards that of the Institute, the sugar industry should be expected to contribute and the first representative Board should evolve a practical scheme of contribution. It is held that the peculiar conditions of India especially the importance of the gur industry preclude the complete elimination of Government interest in the Institute and that, therefore, even when the industry is in a position to take over the main control, its funds should be provided by a voluntary levy on factories supplemented by a Government subsidy to ensure consideration of the interests of the small grower. The work of the Board and the Institute must be supplemented by the establishment of a Sugar School forming an integral part of the Institute and providing the specialised technical training in field and factory which will qualify men to enter the sugar industry as competent workers. The Sugar School should eventually be affiliated to a University and should then confer a B. Sc. degree on successful students. A site in the Basti or Kheri district of the United Provinces is suggested as suitable for the location of the Research Institute and the headquarters of the Sugar Board.

Tariffs.—The Committee consider that the present tariff combined with the advantages resulting from ocean and railway freights should provide ample protection for the Indian sugar industry and that, if a scheme of Imperial preference is adopted generally—it is pointed out incidentally that the only part of the Empire which would benefit as regards sugar is Mauritius—it should take the form of a proportionate reduction on the present tariff. A number of recommendations are made with a view to secur an improvement in crop forecastes and other statistical information relating to sugar.

ABSORPTION OF GOLD (both coin and bullion) IN INDIA.

(*In thousands of £ sterling.*)

	Average of 5 years ending.																
	1888-89.	1893-94.	1898-99.	1903-04.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	Average of 5 years ending 1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20. (*b*)
	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)
1. Production ..	..	463	1,226	1,967	2,267	2,207	2,20	2,240	2,273	2,293	2,243	2,340	2,367	2,303	2,222	2,061	2,624
2. Imports ..	..	2,857	3,403	8,667	11,233	16,687	18,594	27,660	27,527	18,820	21,858	7,133	3,520	2,839	17,925	1,517	45,336
3. Exports ..	..	1,310	1,894	4,547	5,000	2,234	2,607	2,487	4,860	3,267	3,091	2,040	4,260	(*a*) 67	(*a*) 125	(*a*) 3,55	(*a*) 3,075
4 Net imports (*i.e.*, 2—3)	2,297	1,547	1,509	4,120	6,233	14,453	15,987	25,173	22,667	15,553	18,767	5,093	—740	2,772	17,800	—2 038	(*a*) 42,261
5. Net addition to stock (*i.e.*, 1+4)	2,297	2,010	2,735	6,087	8,500	16,660	18,187	27,413	24,940	17,846	21,010	7,433	1,627	(*a*) 5,075	(*a*) 20,023	(*a*) 23	(*a*) 44,885
6 Balance held in mints and Government Treasuries and Currency and Gold Standard Reserves	..	..	439	8,587	4,380	6,127	6,487	15,827	19,960	15,000	12,740	10,386	8,428	8,110	17,911	11,583	44,487
7. Increase (+) or decrease (—) in stock held in mints, etc., as compared with the preceding year	..	..	+405	+1,780	—2,167	+6 340	+60	+9 340	+4,133	—4,960	+2,983	—4,614	—1,958	—318	+9.801	—6,328	+27,112
8. Net absorption (*i.e.*, 5—7) ..	2,297	2,010	2,330	4,307	10,667	10,320	18,127	18,073	20,807	22,806	18,027	12,047	3,585	5,393	10 221	6.351	17,773
9. Progressive total of additions to stock	25,766	34,853	37,650	67,460	105,873	140,227	158,414	185,827	210,767	228 613	184,770	236,046	237,673	242,748	262,770	262,793	307,678
10. Net progressive absorption ..	25,766	34,853	37,211	58,873	101,493	123,800	151,927	170,000	190.807	213.613	172,029	2 5.660	229,245	234,638	244,859	251,210	268,983

Note.—The figures in this table have been revised. The quinquennial average figures are inserted only for comparative purposes. The progressive total of additions to stock (item 9) and net progressive absorption (item 10) are calculated on the annual figures and are not based on these averages. Item 9 is the sum of the yearly figures in item 5 and item 10 the sum of the yearly figures in item 8.

(*a*) Excludes gold imported and exported on behalf of the Bank of England.

(*b*) Rupees figures for 1919-20 have been converted at the rate of Rs 10= £1.

COMMERCIAL INTELLIGENCE SYSTEM.

The Commercial Intelligence Department, India, was founded in 1905 under the control of a Director General of Commercial Intelligence. Its primary object was the supply to the public of such information as would stimulate Indian trade development.

As now constituted the Department serves the purpose of a Central Bureau at which information on subjects of commercial interest is collected and disseminated to the public, and from which replies are posted to enquiries by business men on commercial matters. It is situated at 1, Council House Street, Calcutta, the headquarters of the Director-General. The information collected by the Department and intended for general publication is printed in its weekly official organ, the "**Indian Trade Journal.**" The principal features of the "Journal" are (*a*) information as to Tariff Changes in the United Kingdom and elsewhere which affect Indian interests, (*b*) Summaries of the leading features of consular and other trade reports, (*c*) Abstracts of the proceedings of the various Chambers of Commerce in India, (*d*) Abstracts of crop reports and forecasts, (*e*) Government orders, *communiques* and other notices affecting trade, and (*f*) anonymous enquiries for securing trade introductions. It also contains analyses of Indian trade statistics.

A Commercial Museum has been permanently organised as a part of the Commercial Intelligence Department with the object of bringing together purchasers and suppliers of Indian manufactures. It thus supplements the existing resources of the Department as a bureau of information, and stimulates the development of the natural resources of the country. The Museum contains samples of such goods of Indian manufacture as have been received for exhibition together with information as to prices and the names of the manufacturers and commercial agents. The exhibits have been carefully grouped and catalogued. Order books are available in which orders may be registered direct with the manufacturers or their respective commercial agents. An Enquiry Office is attached to the Museum, which is also located at 1, Council House Street, Calcutta, and is open on week days from 10-30 a.m. to 5-30 p.m. and on Saturdays from 10-30 a.m. to 2-30 p.m. *Admission Free.*

THE INDIAN DEPARTMENT OF STATISTICS.

One of the many lessons of the War is that statistics must increasingly become the guide of Government as the haphazard methods of the past are outgrown. Statistics are no longer the mere by-products of departmental accounting, nor are they merely ancillary to administration in the narrow sense, but they are a scheme of organisation in themselves framed with the broadest purposes in view They are the quantitative expression of the activities of the people and are, therefore, of the greatest significance. Similarly the War taught the United Kingdom as it did the United States that statistics were winning the war for these countries, especially in regard to the food-supply and the rationing of raw materials. In the United States during the year which followed the entrance of that country into the War, the statistical organisation doubled its scope. Similarly in India as in the Dominions of Canada, Australia, New Zealand and South Africa, the War showed that a centralised statistical system was advantageous not merely in regard to the methods of presentation and publication, but in regard to the skill with which the statistics could be collected. In 1917 it will be remembered Italy reorganised her statistics remembering doubtless the effectiveness of the *Statistisches Reichs Amt* as a weapon of Germany. The War has demonstrated that statistics are not merely a record of what has been, but of use in showing what will be. As the Dominion Statistician of Canada has pointed out: "The duty of a statistical organisation is to assist directly in the day to day problems of administration, as well as to provide a theoretical background."

The scope of the Department is in a nut shell that the Department should be the central thinking office on the subject of Indian statistics Mr. A. L. Bowley has pointed out that among the functions of a central statistical office are the following: "Cognizance of all the statistics of more than departmental importance which are published officially . . . . . Misleading statistics must be suppressed, overlapping must be stopped, careful plans must be devised for filling in the gaps at present left, and preparations made for investigation of matters likely to become of public importance. All Bills involving or affecting the collection of statistics should be considered by it . . . . Publications for the use of the public should in some cases be edited by it, with careful definitions, and with short analyses and criticism stating accurately and intelligibly the purport and meaning of their contents; in other cases, where a department already exists for such publication, there should be co-operation with a view to carrying out the purposes already indicated."

The year 1919-20 was an important year in the activities of the Department of Statistics in India. A conclusion was come to with regard to the future scope of the Department and of its reorganisation. The Department continued to be the central storehouse of statistics of all kinds, not merely those relating to commerce, but also those relating to other economic and social phenomena, such as labour statistics, especially statistics of the cost of living, wages, etc., industries, finance, education, law and justice, and vital statistics.

The Department is attempting more and more to become a national laboratory for the collection of economic and social phenomena on behalf of Government. There are as yet no statistics acts for the collection of statistics as is the case with Canada, Australia, New Zealand and South Africa. There are, however, legislative enactments dealing with the collection of statistics of census, foreign trade, and other similar matters. There is, however, no one act by which statistics can at present be collected. In the near future especially in regard to Census of Industrial Production, an act similar to that in the Dominions or in the United Kingdom will be necessary.

Since the forties of the last century, the publication of statistics has been systematically undertaken by the India Office. **The history of statistical development** in the Government of India is briefly as follows: In 1871, a Director-General of Statistics was appointed. The first occupant of the post was Sir William Hunter. He was concerned chiefly with the organisation of a statistical survey of the Indian Empire which began in 1869. In 1895 it was considered that the disconnected manner in which Indian statistics were compiled and published by the various departments of the Government of India seriously detracted from their value and that intelligent examination, collation and discussion were necessary in order to secure uniformity and to render these statistics as useful as they might and should be, a Director-General of Statistics was therefore appointed in 1895 This arrangement continued until 1905 when the office became a part of the new office of the Director-General of Commercial Intelligence. From the 1st of April 1914, the Department of Statistics was formed as the experience of working of the Commercial Intelligence Department had shown that a Commercial Intelligence Department and a Central Statistical Department could not consistently with efficiency be combined under the charge of one officer.

There are at present **ten sections** which deal with different kinds of work:—Section (*i*) deals with administration, pay and pensions, records, distribution of publications and correspondence connected therewith, etc. Section (*ii*) deals with wholesale and retail prices and cost of living indexes. It is to this section that is entrusted the working out of data on the fall in the purchasing power of money. Section (*iii*) deals with statistics of rural, urban and industrial wages. The statistics of wages include not merely money or nominal wages, but real and effective, that is, in calculating real wage rates, the increase in the cost of living is taken into account. Section (*iv*) deals with a series of important judicial administrative, educational and vital statistics. In recent years, developments in education and sanitation have made these statistics of great importance as they are the basis of education and of public health, one might even say of the moral tone of the whole range of social life. Section (*v*) deals with rail and river-borne trade statistics which in a country such as India is of very great importance, especially during times of high prices, scarcity and famine. Section (*vi*) deals with similar statistics relating to the rail and river-borne and frontier trade for the Presidency of Bengal. This is in fact provincial work which will eventually be transferred to the Director of Industries, Bengal. Section (*vii*) the largest section of the department deals with foreign commerce, imports and exports of merchandise, treasure, especially customs duties, coasting trade, shipping, etc. Section (*viii*) deals with the trade carried across the land frontier of India which extends to a distance of no less than 4,800 miles. Section (*ix*) another important division of the department deals with the main industry of the country, namely, agriculture. In recent years, the Government of India and local Governments have devoted much attention to the improvement of these statistics, especially statistics relating to the crop forecasts. Owing to a highly developed system of land revenue, the statistics of area under crops are perhaps better than those of any other country in the world. In regard, however, to estimates of outturn this cannot be said, although considerable improvements have been made on the suggestion of the Central Statistical Department. In addition to agricultural statistics this section deals with cattle census, tea and coffee production, rubber production and other matters connected with agriculture and land revenue. Section (*x*) which will shortly be divided into two sections deals at present mainly with industrial and financial statistics. Statistics relating to the working of factories, industrial concerns of all kinds, joint stock companies, co-operative societies and banks are also handled by this section. Financial statistics are scrutinised and compiled in this part of the office.

Staff.—At the head of the Department is the Director who will in future be assisted by a gazetted officer of wide statistical experience and by three superintendents. The Department consists of about 100 assistants. There are two divisions in the Department, an upper and a lower. The upper division consists of supervising staff with men who are mostly distinguished university graduates in mathematics or economics and the lower division of compiler amongst whom there are many graduates of the University.

It will thus be seen that the work of the Department of Statistics resembles the work effected by the Central Bureau of Statistics in the Dominions. It differs, however, in a large degree from similar work done at the Board of Trade. In the United Kingdom, there is no Central Department of Statistics. The Board of Trade, however, is the office concerned with general statistical work probably more than any other. Several departments of the Government of the United Kingdom prepare and publish statistical information dealing with matters pertaining to the respective departments. For example, the Board of Customs and Excise publishes statistics of imports and exports (in consultation with the Board of Trade); the Ministry of Agriculture the agricultural statistics of England and Wales and prices; the Ministry of Health the statistics of census and public health, etc.; the Ministry of Labour retail prices, wages and statistics of strikes and lock-outs; the Home Office statistics of

mines, minerals, and crime and statistics of a similar nature; the Board of Inland Revenue statistical information relating to general revenue matters, income-tax, duties, stamps, and estate duties. The Department of Statistics in India has not only to compile the all-India figures from provincial or local returns but has to digest, summarise, rearrange and in many cases to convert statistical data.

The work of the Department was put on a solid foundation by Mr. J. E. O'Conor who held office from 1895 to 1902 and at present an attempt is being made to build a structure of growing usefulness, especially in regard to domestic and foreign commerce on this foundation. There is and must inevitably be a tendency to expansion in the work of the Department.

As the decennial census is in a country with 330 millions a matter of considerable organisation, the Government of India have placed this under a special Officer called the **Census Commissioner** (Mr. J. T. Marten) who is for official purposes subordinate to the Department of Education as the Department of Education in the Government of India is responsible for public health.

Recent labour troubles throughout the country and the obligations in connexion with labour, undertaken by India as a signatory of the Treaty of Peace, have made it necessary to develop the **labour statistical work** of the Department. Local Governments, such as the Government of Bombay and the Government of Madras, have formed, or are in the process of forming, labour bureaux of their own This will be of great advantage to the Central Statistical Office, especially in regard to the collection of more accurate information regarding the movement of wages and prices.

Under the reorganisation, three features of the centralised statistical bureau will be developed In the first place, a staff of experienced clerks capable of being shifted from section to section during times of pressure of work will be a feature of the new statistical office as statistical work in the various sections has much ebb and flow. Another line of development will be the increased use of **mechanical appliances** in statistical work. During the year 1920 machines were obtained from England and have already been greatly in use in the work of the Department where labour saving is important. India, however, is far behind the United Kingdom, France, the United States, and especially the Dominions, in regard to machinery for statistical work. The War and the consequent scarcity of male labour revolutionised statistical work in the United Kingdom and to-day punching, sorting, and tabulating by machinery are the order of the day. The Hollerith and especially the Powers card punching and electric tabulating machines have revolutionised statistical compilation and the day is not far distant when the whole of the customs statistics will be compiled by machinery in one central office in the Government of India instead of by a large army of clerks in the local customs houses and in the Department of Statistics. Another feature of the bureau which calls for mention is the Library. During the year arrangements were made to house the **statistical library** which contains statistics of every country in the world with the library of the Commercial Intelligence Department and the Controller of Patents Special steps have in the past few years been taken to make the library the outstanding library in India in (1) works on statistical technique and (2) statistical publications of the different countries of the world. Up to date works on Economics and Finance are also available. The amalgamation of the library has reduced overlapping and has rendered some of the previously inaccessible works generally available. The work of the Imperial Library in Calcutta has not been interfered with and indeed the Librarian of the Imperial Library has at all times been of assistance.

As is evident from what has been said the re-organisation of the Department is still in process of completion. The demands made on the Department by the Government of India, local Governments and the public have far exceeded the expectations. Indian States have co-operated in a way which has brought the Department into the closest possible touch with these States which are important in the statistical conspectus of India. On the suggestion of the Conference of Ruling Princes and Chiefs of India, which met in Delhi in 1917, a class is held annually in Calcutta. 29 officials attended the class held in November 1919, representing Hyderabad, Baroda, Mysore, Travancore, Gwalior, Patiala and other large States. A class was again held in January 1921 and 8 attaches were deputed for training.

The Department is always glad to forward information of a statistical nature relating to commerce, industry, labour, prices, wages, cost of living, education and other statistics and promptly attends to inquiries, written or verbal.

The **address** of the Department is:—Department of Statistics, India, No. 1, Council House Street, Calcutta.

INDIAN COTTON DUTIES ACT.

The origin of this fiscal measure dates back to 1894 when the embarrassment caused to the finances of India by the fall in exchange drove the Government of India to the necessity of adopting measures to increase their sources of revenue. Among these measures was the re-imposition of the Customs Tariff which had been in force prior to 1882 subject, however, to this difference that cotton yarns and fabrics, which had formerly been subjected to an import duty, were in 1894, excluded from the list of dutiable articles. This partial re-imposition of import duties had been recommended by the Herschell Commission which, in reporting in 1893 on the currency question, had favoured this method of adding to the revenue as being the least likely to excite opposition. In point of fact, however, this recommendation which was carried into effect in the Indian Tariff Act of March 1894 gave rise to very marked opposition. In support of their policy the Government appealed to the Resolutions passed in 1877 and reaffirmed in 1879 by the House of Commons, the first of which had condemned the levy of import duties on cotton fabrics imported into India as "being contrary to sound commercial policy," while the latter called upon the Government of India to effect "the complete abolition of these duties as being unjust alike to the Indian consumer and to the English producer." It was, however, an open secret that the decision to exclude from the list of dutiable articles cotton yarns and fabrics was not the decision of the Government of India but that of the Secretary of State. It was pertinently pointed out that the volume of trade in cotton goods and yarns then represented nearly one-half of the total imports from abroad, and that the exemption of these important commodities when practically every single other commodity was being subjected to an import duty could not be justified on its merits as a sound fiscal measure, much less when it was an admitted fact that the Budget would still show a deficit.

Excise Duties Imposed.—The opposition to this measure, though it failed to secure its rejection in the Legislative Council, was strong enough to induce the Secretary of State to reconsider the matter. Yielding to the united representations of the Government of India and of Indian public opinion, His Majesty's Government eventually agreed to the re-imposition of import duties on cotton yarns and fabrics provided that it could be shown that such a measure was necessitated by the position of Indian finances, and that it was combined with an Excise duty which would deprive the import tax of any protective character. Accordingly in December 1894, consequent on the further deterioration in the financial position, two bills were introduced in the Legislative Council. The first of these subjected cotton yarns and fabrics to the general import duty of 5 per cent. *ad valorem*. The second imposed an Excise duty on all cotton yarns of 20's and above produced by Mills in British India. In introducing this latter Bill the then Finance Minister, Sir James Westland, was careful to explain that the policy underlying its provisions had been imposed on the Government of India by the Secretary of State in pursuance of the Resolution of the House of Commons quoted above. The provisions of this particular Bill are of little interest. From the first it was recognised that they were unpractical, Lancashire and Indian spinners disagreed as to the point at which the line should be drawn exempting Indian yarns from the Excise Duty. Practical difficulties were pointed out by Indian spinners as to the impossibility of spinning precisely to a particular count. From the Lancashire point of view it was contended that the Bill offered facilities for evasion while it was admitted that under the system adopted in the Bill, the taxation of Indian and Lancashire products was not being carried out on a similar basis.

Act of 1896—The Act was in fact doomed to be short-lived, and in December 1895 the Government of India were compelled to re-consider the whole position and to introduce an entirely new measure which became law in January 1896 as the Indian Cotton Duties Act II of 1896. This measure proceeded from two conclusions, namely, that no attempt should be made to obtain any duty from yarns whether imported or locally manufactured, and that an equal rate of duty should be applied to all woven goods whether imported or of Indian origin. With the object of conciliating the opposition, the rate of duty was fixed at 3½ per cent. as opposed to the general rate of Customs duty of 5 per cent. The main provisions of the Act provided that the assessment for the purposes of collecting the Excise duty should be based on returns submitted by the mill-owners; and that provision should be made for a rebate in the case of woven goods exported out of India. No control beyond a requirement that statistical returns should be furnished was attempted in respect of spinning mills. On the other hand certain concessions in the matter of import duty on Mill stores were made by executive order so as to place Indian Mills on a footing more or less equal to their Lancashire competitors.

Criticisms of the Measure.—It is not possible within the limits of the present article to do more than summarise the criticisms with which this measure was received in India. Much of the opposition was based on grounds of a transient character; as for instance that the Indian industry was then in a state of continued depression and that it had been hard hit, particularly in respect of its export trade, by the currency legislation, and by the uncertainty as to the fiscal policy of Government. In some quarters objection was offered to the exemption of yarn, which it was alleged, would place the Indian hand weaving industry at an advantage with the Indian power weaving industry. But the hostility to this measure, as also to the earlier measures already described, clearly proceeded from the feeling that the policy of the Government of India and of the Secretary of State had been dictated by Lancashire, and that the action of Lancashire was due not so much to the fact that there was any real competition between Indian and Manchester goods, but to a desire to handicap the Indian industry

whose progress was already causing uneasiness to Lancashire interests. It was argued that the imports from Lancashire were practically all of the higher counts, which, for climatic and other reasons, Indian mills could not produce; that in any case the advantage to the Indian millowner of the import duty was inconsiderable and was counterbalanced by certain drawbacks, arising from the inferiority of Indian labour, which could not be overcome; and that this advantage, such as it was, could scarcely be said to have a protective character, in view of the higher cost of initial equipment in the case of an Indian mill which has to import its machinery, and of working expenses consequent on the scarcity of skilled labour and on the necessity of importing stores required in the production of cloth. Finally, from the standpoint of the consumer, very severe criticism was directed against the reduction, in favour of imported cotton goods, of the general rate of duty from 5 per cent. to 3½ per cent. on the ground that the effect of the legislation would relieve the richer classes who were consumers of the finer Manchester fabrics and impose new taxation on the poorer classes whose requirements were met by the Indian mills.

New Factors in the Situation.—Since the passing of this measure into law the policy of the Government of India in this respect has frequently been the subject of attack in the press and in the Legislative Councils while it has also formed the subject of continued representations by the industrial interests affected and political organizations. In more recent years the agitation in favour of the abolition of the Excise duties has been revived by the growth in England of a strong body of public opinion in opposition to the policy of Free Trade. Advantage has been taken of this new phase in English economic thought to press on behalf of India the acceptance of a policy of Protection and the removal of the Excise duties is now claimed by the opponents of this measure as a necessary corollary of the application to the British Empire of the principles associated with the name of Mr. Chamberlain. A new factor in the situation which has strengthened the position of those who are in opposition to the Excise duties is to be found in the severe competition which Indian mills have to face in China as well as in India from the Japanese industry. The Japanese market was lost to India in the early years of this century. More recently, however, Japan has entered as a competitor with India into the China market, while within the last few years it has pushed its advantage as against the Indian millowner in the Indian market itself. On two occasions within the last ten years the question of Excise duties has come prominently to the front as a result of debates in the Viceroy's Council. The official attitude is firmly based on the position that the Excise duties stand and fall with the import duties. Against such an attitude all arguments based either on the advantages of a Protectionist as opposed to a Free Trade policy or on the handicap to which the present system exposes the Indian millowner can, of course, make no head way. The Government of India are confronted with a heavy recurring loss in their revenues as a result of the abolition of the opium traffic.

Policy of 1917.—The policy of Government towards the Cotton Duties underwent a further development in 1917. In the budget of that year provision was made for interest and sinking fund charges on £ 100 millions, the contribution of India towards the cost of the war. This demanded in addition to the natural increase in the revenues fresh taxation to the extent of £ 3 millions per annum. Amongst the expedients adopted to produce this revenue was the raising of the import duty on cotton goods from 3½ per cent to 7½ per cent. which is the general tariff rate. At the same time the cotton excise duty was fixed to remain at the previous figure of 3½ per cent thus giving the indigenous industry a slight protection to the extent of 4 per cent. The question of the abolition of the Excise entirely had to be dismissed from consideration in view of the demands upon the exchequer, as it was estimated to produce in 1917-18 £ 320,000. By means of the increase in the tariff on Cotton Duties the Finance Member estimated to produce an additional £ 1 million per annum. The proposal was received with immense satisfaction in India as a step towards the righting of what is almost everywhere regarded as a reverse economic wrong. It aroused very vehement protests in Lancashire where the cotton industry organised its political vote and brought great pressure to bear upon the Secretary of State to withdraw the measure. Mr. Austen Chamberlain, the then Secretary of State for India, stood firm and with the Government at his back refused to budge an inch from the position which he had taken up in supporting the Government of India in this matter. There were anxious moments in the House of Commons when the Labour Party joining with the Irish Nationalists and the Lancashire vote mobilised its forces against the Government especially as the attitude of Mr. Asquith and his following was obscure. In the end Mr. Asquith gave his support to the Government policy on the understanding that this, in common with all other fiscal issues, would be reconsidered at the end of the war. With this support, the Bill was carried through the House of Commons by a large majority. The policy laid down in 1917 has been maintained. The Excise Duty remains stationary at 3½ per cent for purely revenue purposes. The imports of piecegoods have been subjected to the same tariff as other imports in all variations of the Customs duties. When the general tariff was raised to 11 per cent. in the Budget of 1921, piece goods shared the general lot. There were some mutterings from Lancashire, but when it was realised that these duties were fixed by the Legislative Assembly, which would not listen to any proposal for differential treatment, the murmurs subsided.

THE INDIAN COTTON COMMITTEE.

A resolution issued by the Government of India in September 1917 announced the appointment of a Committee to examine the possibilities of increasing the cultivation of long-stapled cotton in India, of improving existing methods of ginning and marketing cotton, of preventing adulteration, damping and mixing, of improving the accuracy of the cotton forecasts and, generally, of making the statistical information published by Government of greater utility to the cotton trade. The Committee were also directed to submit recommendations in regard to the staff required and the organization necessary for the development of the cultivation of long-stapled cotton in tracts which they considered suitable for that purpose.

Personnel.—The Committee consisted of the following:—Mr. J. MacKenna, C.I.E., I.C.S., Agricultural Adviser to the Government of India, President. Mr. N. N. Wadia, C.I.E., Ex-Chairman, Bombay Mill Owners Association, Mr. F. Hodgkinson, Member of the Council of the British Cotton Growing Association, Mr. H. F. Ashton, Executive Engineer, Punjab, Mr. G. S. Henderson, Imperial Agriculturist, and Mr. W. Roberts, Principal, Lyallpur Agricultural College, Members. Mr. F. Noyce, I.C.S., Secretary.

The **Report** of the Committee, which was issued in April, 1919, opens with an introductory chapter which gives an outline of the general position in regard to the world's supply of cotton which led to the appointment of the Committee. To this chapter is appended a tabular statement showing the trade and botanical classification of every variety of cotton grown in India with its length of staple and ginning percentage, the tract in which the variety is grown and its estimated area and outturn in a normal season. It is explained that cotton of which the staple is three quarters of an inch or over is regarded as long staple cotton for the purposes of Bombay, whilst, for the purposes of the Lancashire mills, long staple cotton must be a "commercial inch" in length, the actual measurement being somewhat less, and rather over seven-eighths of an inch. The Committee conclude that, so far as separate figures are available, of the 4,728,000 bales of cotton produced by India in a normal season, 726,000 fall within the Lancashire definition of long staple cotton and an additional 478,000 bales within the Bombay definition.

Division of the Report.—The Report proper is divided into two parts, the first of which is devoted to the agricultural and irrigational aspects of the problems with which the Committee dealt and the second to their commercial aspect. The first part is again divided into chapters in which the cotton growing Provinces and Native States are dealt with separately and ends with some general recommendations regarding agricultural work on cotton. The second part contains four chapters only, one on general commercial questions, more especially the question of preventing malpractices in ginning and pressing factories, one on cotton forecasts and statistics, one in which the establishment of an East Indian Cotton Association in Bombay is recommended, and one in which the formation of a Central Cotton Committee to act as a link between the Agricultural Department and the trade is advocated.

Agricultural Problems.—The Report emphasizes that, of the methods by which an improvement in the quality and an increase in the outturn of Indian cotton can be secured, botanical work is the most important and reveals the success of the efforts the Agricultural Department has already made in this direction. In the Punjab, the United Provinces, the Central Provinces, Madras and the Broach, Kumpta-Dharwar and Khandesh tracts of Bombay, it has already evolved strains of cotton superior to the indigenous varieties either in staple, yield or ginning percentage (that is, the percentage of lint to the total outturn of lint and seed) and sometimes in all three. In the Central Provinces, where there were, at the time the Report was written, about 700,000 acres under the short-stapled *roseum* variety, the improvement has been in yield and ginning percentage, in the Punjab where there were 276,000 acres under "Punjab American" cotton in 1917-18, the improvement has been in staple and ginning percentage, whilst, in the Tinnevelly tract in Madras with 220,000 acres under the improved variety evolved by the Agricultural Department and known as *Karunganni*, the improvement has been in yield, staple and ginning percentage. It is in these three tracts that the Agricultural Department has achieved its most striking successes in evolving superior strains of cotton. In the Broach and Kumpta-Dharwar tracts, its superior strains have made much less headway, partly owing to the lack of a suitable organisation to push them and partly to the fact that Broach and *Kumpta* cotton are varieties which are possessed of very stable characteristics and it is, therefore, difficult to secure anything in the nature of a recognizable improvement in them. This is also the case in the "Westerns" tract in Madras. The two improved strains which the Agricultural Department has put out in this and the adjacent "Northerns" tract have not proved sufficiently superior to the local cottons to justify their being persevered with. A fresh start has recently been made with two other selections, No. 25 in the case of Westerns and No. 14 in the case of Northerns, and the Committee recommend that these should be given an exhaustive trial. In the Broach tract, where the incursion of the short-stapled cotton known as *goghari* is proving a serious menace to the reputation of Broach cotton, they recommend that the Agricultural Department should endeavour to evolve a type of Broach cotton as superior to *goghari* in staple as is the present Broach cotton when grown pure and superior to it in yield and ginning percentage. They do not consider that the very short-stapled variety of *neglectum* cotton known as *roseum* in the Central Provinces and Khandesh and "Aligarh white-flowered cotton" in the United Provinces should represent the end of the Agricultural Department's efforts to improve the indigenous varieties in those tracts and desire that further attempts

should be made to evolve a superior variety of *neglectum* or *indicum* cotton or a cross between them which can compete successfully with the superior shorter-stapled varieties in the matter of profit to the cultivator For the Punjab, they recommend further trials with the varieties of American cotton known as 280 F. and 285 F which are superior in staple, though not at present in yield and ginning percentage, to the 4 F. variety of which the Punjab American crop now almost entirely consists. These recommendations apply to tracts in which much botanical work has already been done, but there are large tracts which have been left practically untouched botanically. Hyderabad, which produces about one-seventh of the cotton grown in India, is one of these Others are the Cocanada tract in Madras and the Dholleras tract in Bombay. Very little botanical work has been done on the indigenous cottons in the Punjab, on Cambodia in Madras or on the cottons of Burma. The Committee, therefore, recommend that botanical work in these tracts should be taken up at once and in earnest. They also recommend that the important work on cotton breeding, initiated by Mr. Leake at Cawnpore, should be further developed.

An **increase in the outturn** of cotton can be secured not only by an improvement in the variety grown but also by improvements in agricultural practice. The Report points out that the outturn of cleaned cotton to the acre in India is only 85 pounds, whereas in the United States it is 200 pounds, and that improvements in agricultural practice should very considerably reduce this difference. Detailed recommendations are made for each Province and Native State, the most important improvements advocated being the spread of the practice of sowing in lines and of interculture and the working out of suitable rotations including, wherever possible, heavy yielding leguminous fodder crops.

As regards the **organization of the Agricultural Department**, the Committee recommend a large increase in the number of seed farms in order to permit of the control of the selection and distribution of pure seed by the Department in the manner best suited to the local conditions of each tract. They consider that the demonstration of the usefulness of improved agricultural implements and of the advantages resulting from the use of manures and from good cultivation should ordinarily be carried out on the lands of selected cultivators, but that, where the establishment of large demonstration farms is considered desirable, an accurate profit and loss account should be maintained. As for the assistance to be given by the Agricultural Department to the cultivator in getting a better price for a superior product, the Committee recommend an extension of the system of auction sales of unginned cotton which have proved so successful in spreading the 4 F. variety of American cotton in the Punjab. They consider, however, that the Agricultural Department should not, in any one case, attempt to deal with more than 60,000 maunds of cotton, which would give it control over sufficient seed for 400,000 acres. After that the sales should be handed over to other agencies but the Department would still be called upon for advice and assistance in regard to such matters as grading, classification, and the settlement of disputes. The additions to the staff of the Agricultural Department recommended by the Committee for all these purposes, in addition to nine Botanists, an Entomologist for the United Provinces and an Imperial Mycologist, are one Director of Agriculture for Sind, thirteen Deputy Directors of Agriculture belonging to the Indian Agricultural Service and three Assistant Directors who would be members of the Provincial Agricultural Service. For Native States, the additions proposed are two Directors of Agriculture, two Deputy Directors and one Botanist. Both in British territory and in Native States, the subordinate staff would be increased proportionately.

Irrigational Problems—The possibilities of the extension of the cultivation of long staple cotton under irrigation in the cotton growing Provinces of North India—the Punjab, the North-West Frontier Province, the United Provinces and Sind—are examined in great detail in the Report The Committee are very emphatically of opinion that Sind holds out greater possibilities than any other part of India for the growth of superior cotton and strongly recommend that the project for constructing a barrage across the Indus at Sukkur, which would ensure a perennial water supply to some 1½ million acres of land in that Province, should be carried out immediately. They estimate that this would mean an area of 660,000 acres under cotton, of which two-thirds should be cotton of longer staple than any at present grown in India and at least 1⅛ inches in length.

In the Punjab, the Committee anticipate a total of 465,000 acres under American cotton on existing canals in the course of two or three years, an increase of 189,000 acres on the area in 1917, and a further addition of 200,000 acres if three large projects, the Sutlej River Project, the Haveli Project and the Sind Sagar Doab Project, are carried out. Messrs. Wadia and Hodgkinson, however, hold that no irrigation project in the Punjab which may affect the supply of water in the Indus should be undertaken until the Sukkur Barrage Project has been carried out or until a decision that it should be abandoned has been arrived at. In the United Provinces, the Committee consider that the area under the Cawnpore American variety might increase from 2,000 acres to 135,000 acres under the Ganges and Agra Canals, provided a sufficiently high premium for it can be assured. They hold that there are some small possibilities for Punjab American in the North-West Frontier Province, for Cambodia in the east of the Central Provinces and for Cambodia or Upland Georgian on lands which formerly grew poppy in Central India. The cultivation of Cambodia under wells should spread in Madras. A thorough investigation of the possibilities of tube wells and of pump irrigation in the Punjab and the United Provinces is recommended. Broadly speaking, therefore, the extension of irrigation means the cultivation of more American cotton as, in the Peninsula, where the longer stapled indigenous varieties are grown, cotton is not irrigated except in the case of Cambodia under wells in Madras. The only recommendation in the Report in regard to the indigenous varieties under irrigation is that liberal Government loans (*takav* should be granted

for the construction of wells in North Gujarat where greatly increased yields have been obtained under such conditions.

Commercial Problems.—The main problem dealt with by the Committee in the second part of the Report is that of securing to the cultivation an adequate price for the pure or superior varieties of cotton grown as the outcome of the recommendations in the first part. With this object, the Committee recommend the establishment in other parts of India of open markets on the Berar system in which the purchaser of cotton should be able to see exactly what he is buying and to pay for it accordingly. The cotton tracts of the Bombay Presidency except Sind and of the Madras Presidency except the Coconada tract and the Punjab Canal Colonies are considered specially suitable for the establishment of such markets. Other measures proposed are the publication of cotton prices in up-country markets in a way which would enable the cultivator to realise their true significance, an extension of the activities of co-operative sale societies and the standardization of weights on the basis of a cotton maund of 28 pounds, which would prevent the cultivator from being cheated by unscrupulous middlemen. More important than any of these recommendations is the proposal that all ginning and pressing factories should be licensed. The Report states that the malpractices from which the cultivator and the village money lender are responsible are of minor importance compared with those which are carried on in these factories and that it is in them that the bulk of the adulteration, mixing and damping, which have so injuriously affected the reputation of Indian Cotton, takes place. It is, therefore, recommended that all ginning factories to be erected hereafter should conform to the plan for a model factory published with the Report and that all ginning and pressing factories already in existence should be required to conform to the conditions laid down regarding the provision of sufficiently wide platforms for unginned cotton and lint, the paving of press houses and of the compounds of ginning factories, the maintenance of machinery in proper order, the submission of returns, the use of standard weights, the disposal of seed and so on. A preliminary to the issue of licenses would be the assignment to all factories of distinctive numbers and marks, which would enable the cotton dealt with by them to be traced. Licenses would only be issued to factories which conformed to the published plan or were brought up to the standard laid down and would be withdrawn for breach of the conditions mentioned above or on proof of such malpractices as damping, mixing, or adulteration. Complaints would be made by the sufferers and would be investigated by Committees on which the cotton trade would be adequately represented. In order still further to prevent the adulteration or mixing of waste or short staple cotton with long staple cotton, it is recommended that the transport of cotton waste by rail except from one spinning or weaving mill to another or to a port of shipment such as Bombay should be entirely prohibited as well as the transport by sea from one port to another. The transport by rail of cotton either ginned or unginned, loose or in bales, would also be prohibited except to *bona fide* consumers such as spinning or weaving mills or to ports for disposal there or shipment outside India. In cases in which this course would involve hardship transport under license is suggested.

Statistical Information.—The most important recommendations in regard to the improvement of cotton forecasts are that measures should be taken to impress upon the primary reporting agencies the meaning of the term 'normal' and its equivalent in annas, that the yield of cotton should invariably be reported in terms of unginned cotton, the necessary conversion into terms of ginned cotton and of the anna estimate into American notation being made in the office of the Provincial Director of Agriculture, that special care should be taken in estimating the outturn of cotton when grown with other crops and that more use should be made of non-official agencies such as large firms, large and small landholders and ginning factories. The Committee consider that a 'twelve-anna' crop should everywhere be regarded as representing a normal crop unless there are special reasons to the contrary. They also recommend that the work of submitting estimates of outturn should everywhere be handed over to the Agricultural Department as soon as possible and that the results obtained on Government farms should be utilized more largely than at present, especially for purposes of comparison with previous years and for ascertaining ginning percentages. They hold that the submission of returns of cotton ginned and pressed by ginning and pressing factories should be made compulsory by legislation, the penalty for failure being the withdrawal of the license of the factory.

Establishment of a Central Cotton Trade Association.—The Committee suggest not only the better organization of the Agricultural Department but also of the Cotton Trade. The way in which this is to be secured is by the establishment of a Central Cotton Trade Association in Bombay, to be known as the East India Cotton Association which, as far as the control of the cotton trade is concerned, will take the place of the seven distinct bodies representing different branches of the trade which were in existence at the time the Report was written and still exist, though the functions of two of the most important of them, the Bombay Cotton Trade Association and the Bombay Cotton Exchange, are at present exercised by the Cotton Contracts Board. It is intended that the East India Cotton Association should be the permanent successor of the latter. Mr. N. N. Wadia, a member of the Committee, was entrusted with the duty of drawing up a suitable scheme for the latter. This he did in consultation with the Directors of the Liverpool Cotton Association and Mr. N. S. Glazebrooke, Ex-Chairman of the Bombay Cotton Trade Association, and the scheme is at present under the consideration of the Government of India.

Establishment of a Central Cotton Committee.—Finally, the Committee make provision for much closer connexion between the Agricultural Department and the Cotton Trade. They point out the evils which have resulted in the past from the ignorance of the Agricultural Department and the trade of what the other was doing. It is proposed that the Central

Cotton Committee to which all connected with cotton, whether agriculturally or commercially, will be able to turn to for advice or assistance should consist of about twenty members. The nine official members would be the Agricultural Adviser to the Government of India, who would be President, six agricultural experts working on cotton from the six great cotton growing Provinces, the Director General of Commercial Intelligence, and the Director of Statistics. The remaining members, with the exception of a representative of the Co-operative Department, who might be either an official or a non-official, would represent Chambers of Commerce and similar bodies and would also include a representative of Lancashire. The functions of the Committee would be almost entirely advisory but its advice would carry very great weight. It would be of special importance in connexion with legislation proposed on any matters connected with cotton, which would invariably be referred to it, and also in regard to the working of the system of licensing ginning and pressing factories. The penalty of the withdrawal of the license of an offending factory would only be inflicted upon its recommendation. It would assist the Provincial Agricultural Departments in obtaining authoritative valuations of new varieties of cotton and in getting accurate spinning tests carried out. For this purpose a Technologist would be added to its staff. The Committee would work to a large extent through Provincial and Local Sub-Committees whose constitution would be similar to its own though they would be on a smaller scale. Great stress is laid on the necessity of obtaining a Secretary of first class organizing ability.

Cost of the proposals.—The cost of the additions to the staff of the Agricultural Department proposed by the Committee is estimated at Rs. 14 lakhs per annum. An annual grant of at least Rs. 2 lakhs per annum for the Central Cotton Committee is recommended in addition to this. It is suggested that funds might be provided, if considered desirable, by the imposition of a case of eight annas a bale on all cotton used in the mills in India or exported.

Action taken on the Report.—In a Resolution, dated August 2nd, 1919, the Government of India, whilst with a few exceptions, leaving to the discretion of Local Governments the adoption of the recommendations of the first part of the Report, desired them to lose no time in considering the recommendations in respect of additional appointments in the Agricultural Department. The Government of India stated that they were undertaking a detailed examination of the recommendations in the second part and that precedence would be given to the proposals for the formation of a Central Cotton Committee and to those for licensing ginning and pressing factories.

So far from losing no time in considering the Report, the Provincial Governments treated it in a very dilettante spirit, and in Bombay in particular months slipped by without any manifestation of Government interest. Meantime there was a progressive deterioration of some of the good staple crops, Broach suffering from such an invasion of low grade seed that its crop ceased to be a staple crop in the old sense of the term, and the fine Surat cotton was threatened with a similar fate. The proposal to reorganise the Bombay Cotton Trade in one efficient organisation, to be called the East India Cotton Association, failed through the jealousy of the small speculative element, resentful of any form of control. The Cotton Contracts Board came to an end in 1921 but its demise caused such confusion that control had to be temporarily re-established. There is some hope that from the lesson of this confusion a stronger organisation will emerge, but that is still doubtful. The first meeting of the Central Committee recommended in the Report was not held until July 1921, when it assembled in Bombay. Amongst the subjects discussed was the proposal of the Committee for the licensing of ginning and pressing factories and the restriction of the transportation of cotton, kappas and waste to prevent fraudulent mixing. Other subjects discussed were the provision for cotton research, particularly in cotton technology, and arrangements for the supply of trade and agricultural information.

ADULTERATION OF PRODUCE.

In August 1917 the Department of Commerce and Industry, Government of India, issued a long memorandum to Chambers of Commerce in India on the subject of the adulteration of Indian produce. This memorandum said:—Cotton is still watered; jute is still watered; groundnuts, hides, indigo, oils are freely adulterated; this at least is common knowledge. It is unnecessary to dilate on the loss to Indian trade which this practice of adulteration must involve, but it appears to the Government of India to be specially important at the present time to endeavour to focus attention on the matter. It seems reasonable to suppose that the present war will be followed by a period of keen competition among industrial nations for materials of all descriptions and for products which India should be in a specially favourable position to supply. But it cannot be expected that India will be able to capture and retain the extended markets which should fall to her share, if steps are not taken to effect a radical improvement in the reputation which, the Government of India fear, some of her products have only too justly merited.

Attitude of Government.—After reviewing the facts concerning the adulteration of wheat, cotton, jute, leather, hemp, and bees' wax the memorandum continued:—it will be seen from the preceding sketch of previous discussions on this subject that the Government of India have been consistently opposed to any attempt to meet the evil by legislative measures. They have held the view that any such measures would be extremely difficult to carry into effect, would seriously hamper trade, and would probably, in any case, prove ineffectual as a practical remedy.

They have maintained the opinion that the proper agency for dealing with these abuses is the trade itself, and that no intervention on the part of Government is desirable. To these views they are still inclined to adhere. At the same time, they would welcome any suggestions on the subject, and would be glad to co-operate, if further discussion should show that any action on their part is at once feasible and desirable It seems to them, however, more probable that the situation could be most satisfactorily dealt with without any intervention on the part of Government. If the leading exporting firms of any particular commodity in India would arrange with their leading buyers that the latter should insist on freedom from adulteration, an improvement could probably be more readily effected by this means than by any action on the part of Government. This would seem to be the most fruitful line of attack, but it has also been suggested that Chambers of Commerce in India might organise some system of certifying to the purity of products before export. This suggestion seems worthy of consideration.

Adulteration of Ghee.—In the autumn of 1917, considerable feeling was evoked in Calcutta by the practice of adulterating ghee. For instance, a panchayat of Marwaris excommunicated five ghee dealers, in one case two partners were excommunicated for one year and ordered to pay Rs. 1,00,000 towards the purchasing of grazing ground for cattle. In another case a father and son were fined Rs. 25,000 and in other cases the fines ranged from Rs. 500 to Rs. 1,000. Feeling waxed so strong that a deputation asked the Governor to move the Government of India to pass an ordinance, pending legislation, penalising both the adulteration of ghee and the selling or stocking of adulterated ghee. Shortly afterwards an Emergency Bill was introduced, by Sir S. P. Sinha, in the Bengal Legislative Council, to amend the Calcutta Municipal Act, with special reference to ghee adulteration. Sir Satyendra, in introducing the Bill, said that the existing law had failed to check the practice of adulterating ghee and selling adulterated ghee in Calcutta. In view of the evils resulting from widespread adulteration it was considered necessary that more stringent measures should be taken to provide for the purity of the article and to penalise the manufacture, storage, and sale of ghee that was adulterated. In this Bill a definition for adulteration had been introduced by which ghee must not consist of any article which was not extracted from milk. The penalty imposed under the Bill for offences ranged from a fine of Rs. 200 to Rs. 1,000. The Bill was taken up for consideration after suspending the rules of business and passed.

Burma Ghee Adulteration Act.—In Burma a similar Bill was passed in October, 1917, when the mover of the Bill explained that all that the Bill proposed was to ensure that a purchaser who desires to obtain ghee should be entitled to receive an article which was derived exclusively from milk. If purchaser desired a cheaper substitute, the Bill did not prevent him from obtaining it. It did, however, prevent him from receiving such substitute under the impression he was purchasing ghee. It was not anticipated that the Bill would effect any dislocation of any established trade. It would be necessary for manufacturers and dealers of mixtures which had hitherto been sold under the name of ghee to arrange to sell such mixture under distinctive names in order that the customer might be fully aware he was not purchasing ghee. If such names were speedily adopted, the evils resulting from the sale of these mixtures as ghee would be prevented without any loss or dislocation of industry.

THE CIVIL VETERINARY DEPARTMENT.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle breeding, horse and mule breeding, and educational work in veterinary colleges.

In 1905 and the following years both the superior and the subordinate establishments were considerably increased; but the strength of the subordinate staff in most provinces was still far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention The post of Inspector-General, Civil Veterinary Department, was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. Of late years small veterinary departments, modelled on the Civil Veterinary Department, were started in several native states.

Banking.

On the 27th January 1921 the Imperial Bank of India, constituted under the Imperial Bank of India Act, XLVII of 1920, was established, taking over the undertakings and business of the three Presidency Banks of Bengal, Bombay, and Madras.

The Bank is controlled by Local Boards at Calcutta, Bombay and Madras, and by a Central, Board of Governors, consisting of the Presidents and Vice-Presidents of the Local Boards, the Controller of Currency, or other Officer nominated by the Governor-General-in Council, certain non-officials, not exceeding four, also nominated by the Governor-General in Council, the Secretaries of the Local Boards and the two Managing Governors.

The Bank has Local Head Offices at Calcutta, Bombay, and Madras, an office in London, and Branches at the following places

CALCUTTA :
Bara Bazaar
Clive Street.
Park Street.

BOMBAY :
Byculla
Mandvi
Sandhurst Road.

MADRAS :
Mount Road.

Agra.
Ahmedabad
City Sub-Branch.

Akola.
Akyab
Allahabad.
Alleppey.
Amraoti
Bangalore
Bellary.
Benares
Berhampore
Bezwada.
Broach
Calicut
Cawnpore
Chittagong
Cochin
Cocanada
Coimbatore
Colombo
Cuttack
Dacca
Delhi.
Erode
Guntur
Hyderabad (Sind)
Hyderabad (Deccan).
Indore
Jalgaon
Jalpaiguri
Jubbulpore
Karachi
Lahore
Lucknow
Lyallpore
Madura
Mandalay
Mangalore
Masulipatam.
Moulmein
Multan.
Nagpore.
Narainganje.
Negapatam
Ootacamund.
Patna.
Poona
Quetta
Rajahmundry
Rajkot
Rangoon
Salem
Secunderabad
Sholapur
Simla
Sukkur
Surat
Tellicherry
Tuchinopoly.
Trivandrum.
Tuticorin.
Vizianagram

Arrangements are in hand for opening further Branches at:—Ambala, Amritsar Asansol, Bareilly, Chandpur, Gorakhpur, Larkhana, Madaripore, Meerut, Moradabad, Muzaffarpore, Mymensingh, Peshawar, Rawalpindi and Serajgunge.

In Schedule I Part 1 of the Act, the various descriptions of business which the Bank may transact are laid down, and in Part 2 it is expressly provided that the Bank shall not transact any kind of banking business other than that sanctioned in Part 1.

Briefly stated, the main classes of business sanctioned are :—

(1) Advancing money upon the security of :—

(*a*) Stocks, &c., in which a trustee is authorised by Act to invest trust monies.

(*b*) Securities issued by State aided Railways, notified by the Governor-General-in-Council.

(*c*) Debentures, or other securities issued under Act, by, or on behalf of, a District Board.

(*d*) Goods, or documents of title thereto, deposited with, or assigned to the Bank.

(*e*) Accepted Bills of Exchange or Pro Notes.

(*f*) Fully paid shares and debentures of Companies with limited liability or immoveable property or documents of title relating thereto, as collateral security where the original security is one of those specified in *a*, *b*, *c*, *d* and, if authorised by the Central Board, in *e*.

(2) With the sanction of the Local Government, advancing money to Courts of Wards upon security of estates in their charge.

(3) Drawing, accepting, discounting, buying and selling bills of exchange and other negotiable securities payable in India and Ceylon, and subject to the directions of the Governor-General in Council, the discounting, buying and selling of bills of exchange payable outside India for and from or to such Banks as may be approved.

(4) Investing the Banks' funds in the securities referred to in (1) *a*, *b*, *c*.

(5) Making Bank Post Bills and Letters of Credit payable in India and Ceylon.

(6) Buying and selling gold and silver.

(7) Receiving deposits.

(8) Receiving securities for safe custody.

(9) Selling such properties as may come into the Bank's possession in satisfaction of claims.

(10) Transacting agency business on commission.

(11) Acting as Administrator, and winding up estates.

(12) Drawing bills of exchange and granting letters of credit payable out of India for the use of principles in connection with (11) and also for private constituents for *bona fide* personal needs.

(13) Buying, for the purpose of meeting such bills, &c., bills of exchange payable out of India at any usance not exceeding six months.

(14) Borrowing money in India.

(15) Borrowing money in England upon security of assets of the Bank, but not otherwise.

The principal restrictions placed on the business of the Bank in Part 2 are as follows:

(1) It shall not make any loan or advance:—

(*a*) For a longer period than six months;

(*b*) upon the security of stock or shares of the Bank;

(*c*) save in the case of estates specified in Part I (Courts of Ward) upon mortgage or security of immovable property or documents of title thereof.

(2) The amount which may be advanced to any individual or partnership is limited.

(3) Discounts cannot be made or advances on personal security given, unless such discounts or advances carry with them the several responsibilities of at least two persons or firms unconnected with each other in general partnership.

The Balance Sheet of the Bank as at 30th June 1921 was as follows:—

Liabilities	Rs	a.	p.	Assets	Rs	a.	p.
Subscribed Capital	10,65,75,000	0	0	Government Securities	15,17,39,984	14	8
				Other Authorized Securities under the Act ..	1,35,25,004	12	0
Capital Paid up..	5,17,68,250	0	0	Loans ..	13,96,25,465	15	3
Reserve ..	3,71,21,400	0	0	Cash Credits	22,57,13,176	4	7
Public Deposits	22,20,00,953	5	8	Inland Bills discounted and purchased ..	13,12,50,438	5	3
Other Deposits	70,16,37,999	4	4	Foreign Bills discounted and purchased ..	38,746	12	8
Loans against Securities per contra	55,41,463	6	8	Bullion	8,386	11	9
Contingent Liabilities ..	....			Dead Stock	2,06,01,346	4	11
Sundries	97,71,979	9	1	Liability of Constituents for Contingent Liabilities per contra ..	....		
				Sundries	32,17,199	7	9
				Balances with other Banks	16,52,718	14	10
					68,73,72,468	7	8
				Cash	34,34,69,577	2	1
Rupees ..	1,03,08,42,045	9	9	Rupees ..	1,03,08,42,045	9	9

The above Balance Sheet includes—

Deposits in London	£	21,832	4 6
Advances in London	£	382,144	13 9
Cash and Balances at other Banks in London ..	£	99,586	8 2

Government Deposits.

The following statement shows the Government deposits with each Bank at various periods during the last 40 years or so:—

In Lakhs of rupees.

—	Bank of Bengal.	Bank of Bombay	Bank of Madras.	Total	—	Bank of Bengal.	Bank of Bombay.	Bank of Madras.	Total.
30 June									
1881 ..	230	61	53	344	1913 ..	247	167	68	482
1886 ..	329	82	39	450	1914 ..	290	197	93	580
1891 ..	332	97	53	482	1915 ..	263	187	102	552
1896 ..	225	88	57	370	1916 ..	336	263	115	714
1901 ..	187	90	63	340	1917 ..	1338	716	209	2263
1906 ..	186	93	46	325	1918 ..	664	549	213	1426
1911 ..	198	129	77	404	1919 ..	346	298	142	786
1912 ..	210	155	75	440	1920 ..	801	663	170	1634
					26 January 1921.	364	206	138	708

Government Deposits.

The proportions which Government deposits have borne from time to time to the total Capital Reserve and deposit of the three Banks are shown below :—

In Lakhs of Rupees.

—	1 Capital.	2 Reserve.	3 Government deposits.	4 Other deposits.	Proportion of Government deposits to 1, 2, 3 & 4.
31st December.					
1891	350	97	297	1412	13·7 per cent.
1896	350	158	299	1292	14·2 ,,
1901	360	213	340	1463	14·3 ,,
1906	360	279	307	2745	8·3 ,,
1907	360	294	335	2811	8·8 ,,
1908	360	309	325	2861	8·4 ,,
1909	360	318	307	3265	7·4 ,,
1910	360	331	339	3234	9·7 ,,
1911	360	340	438	3419	9·6 ,,
912	375	361	426	3578	9·0 ,,
1913	375	370	587	3644	11·8 ,,
1914	375	386	561	4002	10·5 ,,
1915	375	369	487	3860	9·5 ,,
1916	375	358	520	4470	9·0 ,,
1917	375	363	771	6771	9·3 ,,
1918	375	340	864	5097	12·9 ,,
1919	375	355	772	7226	8·8 ,,
1920	375	375	901	7725	9.6 ,,

Recent Progress.

The following statements show the progress made by the three Banks within recent years :—

In Lakhs of Rupees.

BANK OF BENGAL.

—	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
31st December.							
1895	200	68	184	677	422	132	10 per cent.
1900	200	103	155	582	243	136	11 ,,
1905	200	140	167	1204	396	181	12 ,,
1906	200	150	160	1505	528	149	12 ,,
1907	200	157	187	1573	460	279	12 ,,
1908	200	165	178	1575	507	349	13 ,,
1909	200	170	168	1760	615	411	14 ,,
1910	200	175	198	1609	514	368	14 ,,
1911	200	180	270	1677	729	321	14 ,,
1912	200	185	234	1711	665	310	14 ,,
1913	200	191	301	1824	840	319	14 ,,
1914	200	200	287	2160	1169	621	16 ,,
1915	200	*204	265	1978	785	793	16 ,,
1916	200	*213	274	2143	772	768	16 ,,
1917	200	†221	448	2934	1482	773	17 ,,
1918	200	‡189	584	2392	894	779	17 ,,
1919	200	‡200	405	3254	997	864	17 ,,
1920	200	‡210	434	3398	1221	910	19½ ,,

* Includes Rs. 63 lakhs as a reserve for depreciation of investments.
† ,, 67 ,, ,, ,, ,,
‡ ,, 25 ,, ,, ,, ,,

BANK OF BOMBAY.

1895	.. ..	100	51	76	358	228	105	11 per cent.
1900	.. ..	100	70	87	432	129	89	11 ,,
1905	.. ..	100	87	92	676	259	158	12 ,,
1906	.. ..	100	92	101	832	354	177	12 ,,
1907	.. ..	100	96	112	821	324	164	13 ,,
1908	.. ..	100	101	94	832	377	149	13 ,,
1909	.. ..	100	103	120	1035	415	163	13 ,,
1910	.. ..	100	105	152	1053	436	149	14 ,,
1911	.. ..	100	106	107	1104	463	208	14 ,,
1912	.. ..	100	106	117	1124	315	210	14 ,,
1913	.. ..	100	106	200	1015	477	232	14 ,,
1914	.. ..	100	110	183	1081	646	202	15 ,,
1915	.. ..	100	100	136	1079	423	276	15 ,,
1916	.. ..	100	90	142	1367	667	312	15 ,,
1917	.. ..	100	92	235	2817	1398	744	17½ ,,
1918	.. ..	100	101	177	1749	542	353	18½ ,,
1919	.. ..	100	110	262	2756	928	315	19½ ,,
1920	.. ..	100	120	349	2748	876	208	22 ,,

BANK OF MADRAS.

——		Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1895	.. ..	50	16	45	278	144	45	10 per cent.
1900	.. ..	60	22	35	260	82	67	8 ,,
1905	.. ..	60	30	41	344	140	71	10 ,,
1906	.. ..	60	32	54	355	151	81	10 ,,
1907	.. ..	60	36	35	416	162	84	10 ,,
1908	.. ..	60	40	52	447	153	84	11 ,,
1909	.. ..	60	44	49	500	141	79	12 ,,
1910	.. ..	60	48	72	567	184	85	12 ,,
1911	.. ..	60	52	59	625	165	104	12 ,,
1912	.. ..	75	70	75	743	196	113	12 ,,
1913	.. ..	75	73	86	805	219	117	12 ,,
1914	.. ..	75	76	91	761	267	134	12 ,,
1915	.. ..	75	65	86	803	256	184	12 ,,
1916	.. ..	75	55	104	960	286	161	12 ,,
1917	.. ..	75	50	87	1020	496	94	12 ,,
1918	.. ..	75	50	102	954	271	139	12 ,,
1919	.. ..	75	45	104	1215	436	175	12 ,,
1920	.. ..	75	45	118	1579	505	211	18 ,,

Note.—(The Banks have power under Sec. 36 (*i*) to draw Bills of Exchange payable out of India under certain stated circumstances, but this permission is of comparatively little importance.)

THE EXCHANGE BANKS.

The Banks carrying on Exchange business in India are merely branch agencies of Banks having their head offices in London, on the Continent, or in the Far East and the United States. Originally their business was confined almost exclusively to the financing of the external trade of India; but in recent years most of them, while continuing to finance this part of India's trade, have also taken an active part in the financing of the internal portion also at the places where their branches are situated.

At one time the Banks carried on their operations in India almost entirely with money borrowed elsewhere, principally in London—the home offices of the Banks attracting deposits for use in India by offering rates of interest much higher than the English Banks were able to quote. Within recent years however it has been discovered that it is possible to attract deposits in India on quite as favourable terms as can be done in London and a very large proportion of the financing done by the Exchange Banks is now carried through by means of money actually borrowed in India. No information is available as to how far *each* Bank has secured deposits in India but the following statement published by the Director-General of Statistics in India shows how rapidly such deposits have grown in the aggregate within recent years.

TOTAL DEPOSITS OF ALL EXCHANGE BANKS SECURED IN INDIA.

In Lakhs of Rupees.

1895	1030
1900	1050
1901	1183
1902	1370
1903	1614
1904	1632
1905	1704
1906	1808
1907	1917
1908	1951
1909	2027
1910	2479
1911	2816
1912	2953
1913	3103
1914	3014
1915	3354
1916	3803
1917	5337
1918 . . .	6185
1919 . . .	7435

Exchange Banks' Investments.

Turning now to the question of the investment of the Banks' resources, so far as it concerns India, this to a great extent consists o the purchase of bills drawn against imports and exports to and from India.

The financing of the import trade originate and is carried through however for the most part by Branches outside India, the Indian Branches' share in the business consisting principally in collecting the amount of the bills at maturity and in furnishing their other branches with information as to the means and standing of the drawees of the bills, and it is as regards the export business that the Indian Branches are more immediately concerned The Exchange Banks have practically a monopoly of the export finance in India and in view of the dimensions of the trade which has to be dealt with the Banks would under ordinary circumstances require to utilise a very large proportion of their resources in carrying through the business. They are able however by a system of rediscount in London to limit the employment of their own resources to a comparatively small figure in relation to the business they actually put through. No definite information can be secured as to the extent to which rediscounting in London is carried on but the following figures appearing in the balance sheets dated 31st December 1920 of the undernoted Banks will give some idea of this.

LIABILITY ON BILLS OF EXCHANGE RE-DISCOUNTED AND STILL CURRENT.

	£
Chartered, Bank of India, Australia and China.	9,585,000
Eastern Bank, Ld.	2,887,000
Hongkong and Shanghai Banking Corporation.	16,276,000
Mercantile Bank of India, Ld. ..	4,382,000
National Bank of India, Ld... ..	7,467,000
Imperial Bank of Persia .	625,000
	41,222,000

The above figures do not of course relate to re-discounts of Indian bills alone, as the Banks operate in other parts of the world also, but it may safely be inferred that bills drawn in India form a very large proportion of the whole.

The bills against exports are largely drawn at three months' sight and may either be "clean" or be accompanied by the documents relating to the goods in respect of which they are drawn. Most of them are drawn on well known firms at home or against credits opened by Banks or financial houses in England and bearing as they do an Exchange Bank endorsement they are readily taken up by the discount houses and Banks in London. Any bills purchased in India are sent home by the first possible Mail so that presuming they are rediscounted as soon as they reach London the Exchange Banks are able to secure the return of their money in about 16 or 17 days instead of having to wait for three months which would be the case if they were unable to rediscount. It must not be assumed however that all bills are rediscounted as soon as they reach London as at times it suits the Banks to hold up the bills in anticipation of a fall in the London discount rate while on occasions also the Banks prefer to hold the bills on their own account as an investment until maturity.

The Banks place themselves in funds in India for the purpose of purchasing export bills in a variety of ways of which the following are the principal:—

(1) Proceeds of import bills as they mature.

(2) Sale of drafts and telegraphic transfers payable in London and elsewhere out of India.

(3) Purchase of Council Bills and Telegraphic Transfers payable in India from the Secretary of State.

(4) Imports of bar gold and silver bullion.

(5) Imports of sovereigns from London, Egypt or Australia.

The remaining business transacted by the Banks in India is of the usual nature and need not be given in detail.

The following is a statement of the position of the various Exchange Banks carrying on business in India as at 31st December 1920 :—

In Thousands of £.

—	Capital.	Reserve.	Deposits.	Cash and Investment.
Chartered Bank of India, Australia & China	3000	3660	48702	12821
Comptoir National D'Escompte de Paris.	10000	2688	142272	15884
Eastern Bank, Ltd.	995	225	8556	3575
Hongkong & Shanghai Banking Corpn...	2375	5582	71418	24776
Imperial Bank of Persia	650	280	3228	4874
International Banking Corpn. (1919)	1000	1640	16466	4986
Mercantile Bank of India	1050	1100	15893	4973
National Bank of India, Ld. ..	2000	2300	45200	14173
National Bank of South Africa	2965	1300	48015	13708
Russo Asiatic Bank (1915) ..	4745	2500	48200	11260
Yokohama Specie Bank	10000	5300	57719	40287
Sumitomo Bank	4000	1700	35141	8395
Bank of Taiwan	4500	968	24279	9407
P. & O. Banking Corpn. Ltd. (31st May 1921)	2500		2662	2169

JOINT STOCK BANKS.

Previous to 1906 there were few Banks of this description operating in India, and such as were then in existence were of comparatively small importance and had their business confined to a very restricted area. The rapid development of this class of Bank, which has been so marked a feature in Banking within recent years, really had its origin in Bombay and set in with the establishment of the Bank of India and the Indian Specie Bank in 1906. After that time there was a perfect stream of new flotations, and although many of the new Companies confined themselves to legitimate banking business, on the other hand a very large number engaged in other businesses in addition and can hardly be properly classed as Banks.

These Banks made very great strides during the first few years of their existence, but it was generally suspected in well informed circles that the business of many of the Banks was of a very speculative and unsafe character and it was a matter of no great surprise to many people when it became known that some of the Banks were in difficulties.

The first important failure to take place was that of the People's Bank of India and the loss of confidence caused by the failure of that Bank resulted in a very large number of other failures, the principal being that of the Indian Specie Bank

The public have for the time being lost much of their confidence in this class of Bank and deposits to a very large extent have been withdrawn and it is feared that a large portion of the money has gone back into hoards. This is very unfortunate as many of the Banks, particularly the older established concerns, have always been recognised as being conducted on safe and prudent lines.

The following shows the position of the better known existing Banks as it appears in the latest available Balance Sheets :—

In Lakhs of Rupees.

—	Capital.	Reserve.	Deposits.	Cash and Investments
Allahabad Bank, Ld.	35	35	934	296
Alliance Bank of Simla, Ld. (1st July 1920).	88	51	1335	619
Bank of Baroda, Ld.	23	14	516	213
Bank of India, Ld.	100	70	1054	430
Bank of Mysore, Ld.	20	6	119	53
Central Bank of India, Ld.	49	20	1369	512
Madras Bank, Ld.	10	2	29	10
Karachi Bank, Ld. (1919)	2	....	28	3
National Financing and Commission Corporation, Ld., now converted into The Bank of Morvi, Ld. (1st July 1920).	40	1	80	58
Oudh Commercial Bank, Ld.	5	2	7	1
Punjab National Bank, Ld.	20	15	379	123
Tata Industrial Bank, Ld.	223	15	1195	589
Union Bank of India, Ld.	59	....	52	24

The principal Banks which have gone into liquidation during the last three or four years are given below along with a Statement of their Capital, Reserve and deposits as at the date of the latest available Balance Sheets :—

In Lakhs of Rupees.

	Capital.	Reserve.	Deposits.
Bank of Upper India, Meerut (1917)	10	....	....
Cosmopolitan Bank ,, ...	1	....	....
Gorakhpur Bank, Gorakhpur ,, ...	3	....	...
Cashmiri Bank, Fyzabad ,, ...	1	....	....
Standard Bank, Bombay ,, ...	10	....	....
Bombay Provincial Bank (1919)	2	...	....
Central Brotherhood Urban Bank of India & Ceylon Ld., Simla. (1919)	1		...

Growth of Joint Stock Banks.

The following figures appearing in the Report of the Director-General of Statistics shew the growth of the Capital, Reserve and Deposits of the principal Joint Stock Banks registered in India :—

In Lakhs of rupees.

	Capital.	*Reserve.*	*Deposits.*
1870 ..	9	1	13
1875 ..	14	2	27
1880 ..	18	3	63
1885 ..	18	5	94
1890 ..	33	17	270
1895 ..	63	31	566
1900 .	82	45	807

	Capital.	*Reserve.*	*Deposits.*
1905 .	84	77	1198
1906 .	133	56	1155
1907	229	63	1400
1908 .	239	69	1626
1909 ..	266	87	2049
1910 ..	275	100	2565
1911 ..	285	126	2529
1912 ..	291	134	2725
1913 ..	231	132	2259
1914 ..	251	141	1710
1915 ..	281	156	1787
1916 ..	287	173	2471
1917 ..	303	162	3117
1918 ..	436	165	4059
1919 ..	539	221	5899

AGENTS IN INDIA OF LONDON BANKS.

Names of London Offices, Agents or Correspondents of certain Banks and Firms (doing banking business) in India.

Name of Bank	London Office—Agents or Correspondents.	Address
Imperial Bank of India	Bank of England	Threadneedle Street, E.C.
	Coutts & Co.	440, Strand, W. C. 2.
	Lloyds Bank, Limited	71, Lombard Street, E.C.3.
	Samuel Montagu & Co.	60, Old Broad Street, E.C.2.
	National Provincial & Union Bank of England, Limited	15, Bishopsgate, E.C. 2.
Other Banks & Kindred Firms.		
Alliance Bank of Simla	Boulton Brothers & Co.	39, Old Broad Street, E.C.2
	London County Westminster & Paris Bank, Limited	41, Lothbury, E. C. 2.
	Barclays Bank, Limited	54, Lombard Street, E.C.3.
	Samuel Montagu & Co. ..	60, Old Broad Street, E.C.2.
Tata Industrial Bank	Lloyds Bank, Limited	71, Lombard Street, E.C. 3.
Allahabad Bank, Limited ..	National Provincial & Union Bank of England, Limited ..	15, Bishopsgate, E. C. 2.
	Samuel Montagu & Co.	60, Old Broad Street, E.C.2.
Central Bank of India, Ltd. ..	London Joint City & Midland Bank, Limited	5, Threadneedle Street, E.C. 2.
Bank of Baroda	The Eastern Bank, Ltd .	4, Crosby Sq., E. C. 3.
Bank of Mysore	Ditto .	Ditto
Grindlay & Co.	London Office .. .	54, Parliament Street.
Thomas Cook & Son	Ditto .	Ludgate Circus, E. C. 4.
King Hamilton & Co. (Calcutta)	Henry S. King & Co .	65, Cornhill E. C. 3.
King King & Co. (Bombay) ..	Ditto	Ditto.

Names of London Offices, Agents or Correspondents of certain Banks and Firms (doing Banking business) in India.

Name of Bank.	London Office—Agents or Correspondents.	Address.
Exchange Banks.		
Eastern Bank	London Office ..	4, Crosby Sq., E. C. 3.
Cox & Co.	Ditto ..	16, Charing Cross, S. W. 1.
Mercantile Bank of India, Ltd ..	Ditto	15, Grace Church St., E.C.3
Chartered Bank of India, Australia and China	Ditto .	38, Bishopsgate, E. C. 2.
National Bank of India ..	Ditto	26, Bishopsgate, E. C. 2.
Hongkong & Shanghai Banking Corporation	Ditto .. .	9, Grace Church St., E.C.3
Yokohama Specie Bank	Ditto .	7, Bishopsgate, E. C. 2.
Bank of Taiwan .. .	Ditto	58, Old Broad St., E.C. 2.
Comptoir National d'Escompte de Paris	Ditto . . .	8-13, King William St., E.C. 4.
Russo-Asiatic Bank .. .	Ditto .	64, Old Broad St., E. C. 2.
International Banking Corporation	Ditto . . .	36, Bishopsgate, E. C. 2.

INDIAN PRIVATE BANKERS AND SHROFFS.

Indian private Bankers and Shroffs flourished in India long before Joint Stock Banks were ever thought of, and it seems likely that they will continue to thrive for some very considerable time to come. The use of the word "Shroff" is usually associated with a person who charges usurious rates of interest to impecunious people, but this is hardly fair to the people known as "shroffs" in banking circles, as there is no doubt that the latter are of very real service to the business community and of very great assistance to Banks in India. Under present conditions the Banks in India can never hope to be able to get into sufficiently close touch with the affairs of the vast trading community in India to enable them to grant accommodation to more than a few of these traders direct, and it is in his capacity as middleman that the shroff proves of such great service. In this capacity also he brings a very considerable volume of business within the scope of the Presidency Banks Act, and enables the Presidency Banks to give accommodation which, without his assistance, the Banks would not be permitted to give. The shroff's position as an intermediary between the trading community and the Banks usually arises in something after the following manner. A Shopkeeper in the bazaar, with limited means of his own, finds that, after using all his own money, he still requires say Rs. 25,000 to stock his shop suitably. He thereupon approaches the shroff, and the latter after very careful inquiries as to the shopkeeper's position grants the accommodation, if he is satisfied that the business is safe. The business, as a rule, is arranged through a hoondee broker, and in the case referred to the latter may probably approach about ten shroffs and secure accommodation from them to the extent of Rs. 2,500 each. A hoondee usually drawn at a currency of about 2 months is almost invariably taken by the shroffs in respect of such advances.

A stage is reached however when the demands on the shroffs are greater than they are able to meet out of their own money, and it is at this point that the assistance of the Banks is called into requisition. The shroffs do this by taking a number of the bills they already hold to the Banks for discount under their endorsement, and the Banks accept such bills freely to an extent determined in each case by the standing of the shroff and the strength of the drawers. The extent to which any one shroff may grant accommodation in the bazaar is therefore dependent on two factors, *viz.*, (1) the limit which he himself may think it advisable to place on his transactions, and (2) the extent to which the Banks are prepared to discount bills bearing his endorsement. The shroffs keep in very close touch with all the traders to whom they grant accommodation, and past experience has shewn that the class of business above referred to is one of the safest the Banks can engage in.

The rates charged by the shroffs are usually based on the rates at which they in turn can discount the bills with the Banks and necessarily vary according to the standing of the borrower and with the season of the year. Generally speaking, however, a charge of two annas per cent. per mensem above the Bank's rate of discount, or 1½ % is a fair average rate charged in Bombay to a first class borrower. Rates in Calcutta and Madras are on a slightly higher scale due in a great measure to the fact that the competition among the shroffs for business is not so keen in these places as it is in Bombay.

The shroffs who engage in the class of business above described are principally Marwaries and Multanis having their head Offices for the most part in Bikanir and Shikarpur, respectively, the business elsewhere than at the Head Offices being carried on by "Moonims" who have very wide powers.

It is not known to what extent native bankers and shroffs receive deposits and engage in exchange business throughout India, but there is no doubt that this is done to a very considerable extent.

THE BANK RATE.

Each Presidency Bank fixed its own Bank rate, and the current rate of each Bank determined to a great extent the rates for all important classes of business within the Bank's sphere of influence. The rates in the three Presidencies were not always uniform, but it seldom happened that a difference of more than 1% existed, more particularly as regards Bombay and Bengal, which seemed to be in closer touch with each other than appeared to be the case with Madras.

The rate fixed represents the rate charged by the Banks on demand loans against Government securities only and advances on other securities or discounts are granted as a rule at a slightly higher rate. Ordinarily such advances or discounts are granted at from one-half to one per cent. over the official rate; but this does not always apply and in the monsoon months, when the Bank rate is sometimes nominal, it often happens that such accommodation is granted at the official rate or even less.

The following statement shows the average Bank Rate of each Bank since 1884:—

Year.	Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.
1884 ..	9·03	4·17	6·60	8·813	3·946	6·379	8·42	4·13	6 27
1885 ..	5·90	4·00	4·95	6·757	4·005	5·381	5·71	3·23	4·47
1886 ..	6·35	6·50	6·42	5·923	6·152	6·037	5 48	5·64	5·56
1887 ..	7·78	3·73	5·75	7·475	3·804	5·639	7·92	3 90	5·91
1888 ..	5·90	5·51	5·70	5·736	5·185	5·460	5·78	5·44	5·61
1889 ..	9·46	4·00	6·73	9·309	4·674	6·991	9·62	4·14	6·88
1890 ..	9·21	3·28	6·24	8·265	3·315	5·790	8·14	3·32	5·73
1891 ..	3·88	2·23	3·05	3·502	2·622	3·062	3·60	2·25	2·92
1892 ..	3·97	3·04	3·50	3·884	3·114	3·499	4·03	3·07	3·55
1893 ..	5·97	3·84	4·90	5·685	4·076	4·880	6·19	4·36	5·27
1894 ..	7·55	3·46	5·50	7·425	3·364	5·394	6·72	3·31	5·01
1895 ..	4·30	3·60	3·95	5·066	3·592	4·329	5·02	3·50	4·26
1896 ..	5·85	5·10	5·47	5·774	5·608	5·691	6·00	5·28	5·64
1897 ..	10·11	5·64	7·87	9·884	5·067	7·925	9·97	6·00	7·98
1898 ..	12·03	4·55	8·29	11·016	5·114	8·065	11·09	4·51	7·80
1899 ..	6·34	5·42	5·88	6·337	5·494	5·915	6·27	5·83	6·05
1900 ..	6· 9	3·79	5·34	6·414	4·272	5·343	7·24	4·50	5·87
1901 ..	7·07	3·83	5·45	6·895	4·070	5·482	7·57	4·09	5·83
1902 ..	6·25	3·43	4·84	6·176	3·549	4·862	7·	4·02	5·51
1903 ..	6· 7	3·48	5·09	6·265	3·494	4·879	7·13	4·27	5·70
1904 ..	5·15	3·82	4·48	5·560	4·190	4·875	6·42	4·07	5·24
1905 ..	5·77	4·42	5·09	5·558	4·630	5·094	6·04	4·19	5·11
1906 ..	7·24	5·28	6·26	6·950	5·885	6·417	7·15	5·04	6·09
1907 ..	7·81	4·11	5·96	7·635	4·576	6·105	8·24	4·54	6·39
1908 ..	7·84	4·02	5·93	7·417	4·244	5·830	8·38	4·38	6·38
1909 ..	6·47	3·82	5·14	6·580	3·907	5·243	7·55	4·41	5·98
1910 ..	6·19	4·14	5·16	6·143	4·510	5·326	7·17	4·65	5·91
1911 ..	6·55	3·52	5·03	6·657	4·358	5·507	7·59	4·35	5·97
1912 ..	6·01	4·10	5·05	6·242	4·592	5·417	7·51	4·59	6·05
1913 ..	7·23	4·62	5·92	6·569	5·331	5·950	7·76	5·54	6·65
1914 ..	5·52	5·28	5·40	5·939	4·961	5·450	6·63	5·16	5·89
1915 ..	5·84	5·30	5·57	5·839	5·543	5·691	5·87	5·54	5·70
1916 ..	7·18	5·65	6·41	7·252	6·321	6·786	7·71	6·48	7·09
1917 ..	6·70	5·42	6·06	6·690	5·364	6·027	8·	6·04	7·32
1918 ..	5·79	5·29	5·54	5·773	5·298	5·435	6·92	6·47	6·69
1919 ..	6·28	5·	5·64	6·243	5·	5·621	7·31	6·	6·65
1920 ..	6·98	5·73	6·35	6·576	5·554	6·065	7·90	6·41	7·15

BANKERS' CLEARING HOUSES.

The principal Clearing Houses in India are those of Calcutta, Bombay, Madras, and Karachi, and of these the first two are by far the most important. The members at these places consist of the Imperial Bank, most of the Exchange Banks and English Banking Agency firms, and a few of the better known of the local Joint Stock Banks. No Bank is entitled to claim to be a member as of right and any application for admission to a Clearing must be proposed and seconded by two members and be subject thereafter to ballot by the existing members.

The duties of settling Bank are undertaken by the Imperial Bank at each of the places mentioned and a representative of each member attends at the office of that Bank on each business day at the time fixed to deliver all cheques he may have negotiated on other members and to receive in exchange all cheques drawn on him negotiated by the latter. After all the cheques have been received and delivered the representative of each Bank advises the settling Bank of the difference between his total receipts and deliveries and the settling Bank thereafter strikes a final balance to satisfy itself that the totals of the debtor balances agrees with the total of the creditor balances. The debtor Banks thereafter arrange to pay the amounts due by them to the settling Bank during the course of the day and the latter in turn arranges to pay on receipt of those amounts the balances due to the creditor Banks. In practice however all the members keep Bank accounts with the settling Bank so that the final balances are settled by cheques and book entries thus doing away with the necessity for cash in any form.

The figures for the Clearing Houses in India above referred to are given below:—

Total amount of Cheques Cleared Annually.

In lakhs of Rupees.

——	Calcutta.	Bombay.	Madras.	Karachi.	Total.
1901	Not available	6511	1338	178	8027
1902	....	7013	1295	268	8576
1903	....	8762	1464	340	10566
1904	....	9492	1536	365	11393
1905	....	10927	1560	324	12811
1906	....	10912	1583	400	12895
1907	22444	12645	1548	530	37167
1908	21281	12585	1754	643	36283
1909	19776	14375	1948	702	36801
1910	22238	13652	2117	755	41762
1911	25763	17605	2083	762	46213
1912	28831	20831	1152	1159	52335
1913	33133	21890	2340	1219	58582
1914	28031	17696	2127	1315	49169
1915	32266	16462	1887	1352	51967
1916	48017	24051	2495	1503	76066
1917	47193	33655	2339	2028	85215
1918	74397	53362	2528	2429	132716
1919	90241	76250	3004	2266	171761
1920	153388	126353	7500	3120	290361

TABLE OF WAGES, INCOME, &c.

Showing the amount for one or more days at the rates of 1 to 16 Rupees per Month of 31 Days.

Rupees	1			2			3			4			5			6			7			8			9			10			11			12			13			14			15			16		
Days	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1	0	0	6	0	1	0	0	1	6	0	2	0	0	2	6	0	3	0	1	0	3	7	0	4	1	0	4	7	0	5	1	0	5	8	0	6	2	0	6	9	0	7	3	0	7	9	0	8	3
2	0	1	0	0	2	0	0	3	1	0	4	1	0	5	1	0	6	2	0	7	2	0	8	3	0	9	3	0	10	3	0	11	4	0	12	4	0	13	5	0	14	5	0	15	6	1	0	6
3	0	1	6	0	3	1	0	4	7	0	6	2	0	7	8	0	9	3	0	10	4	0	12	4	0	13	5	0	14	5	0	15	6	1	1	6	1	2	6	1	4	2	1	5	8	1	7	8	1	8	9
4	0	2	0	0	4	1	0	6	2	0	8	3	0	10	3	0	12	4	0	14	5	1	0	6	1	2	6	1	4	7	1	6	8	1	8	9	1	10	10	1	12	11	1	15	0	2	1	0
5	0	2	6	0	5	1	0	7	8	0	10	3	0	12	10	0	15	5	1	2	0	1	4	7	1	7	2	2	1	9	9	1	12	5	1	14	10	2	1	7	2	4	2	2	6	9	2	9	3
6	0	3	1	0	6	2	0	9	3	0	12	4	0	15	5	1	2	6	1	5	8	1	8	9	1	11	10	1	14	11	2	2	1	2	5	0	2	8	3	2	11	4	2	14	5	3	1	6
7	0	3	7	0	7	2	0	10	10	0	14	5	1	2	0	1	5	8	1	9	3	1	12	10	2	0	6	2	4	1	2	7	9	2	11	3	2	15	0	3	2	7	3	6	2	3	9	9
8	0	4	1	0	8	3	0	12	4	1	0	6	1	4	7	1	8	9	1	12	10	2	1	0	2	5	1	2	9	2	2	13	5	3	1	6	3	5	8	3	9	10	3	13	1	4	2	0
9	0	4	7	0	9	3	0	13	11	1	2	6	1	7	2	1	11	10	2	0	6	2	5	12	9	9	2	14	5	3	3	1	3	7	8	3	12	5	4	1	0	4	5	8	4	10	3
10	0	5	1	0	10	3	0	15	5	1	4	7	1	9	9	1	14	11	2	4	1	2	9	3	2	14	5	3	3	7	3	8	9	3	13	10	4	3	1	4	8	3	4	13	5	5	2	6
11	0	5	8	0	11	4	1	1	0	1	6	8	1	12	4	2	2	0	2	7	8	2	13	4	3	3	1	3	9	9	3	14	5	4	4	0	4	9	10	4	15	6	5	5	2	5	10	9
12	0	6	2	0	12	5	1	2	6	1	8	9	1	14	11	2	5	8	2	11	4	3	1	6	3	7	8	3	13	11	4	4	2	4	10	4	5	0	6	5	6	9	5	12	11	6	3	9
13	0	6	8	0	13	5	1	4	1	1	10	10	2	1	6	2	8	3	2	14	11	3	5	8	3	12	4	4	3	1	4	9	15	5	0	6	5	7	3	5	13	11	6	4	8	6	11	4
14	0	7	2	0	14	5	1	5	8	1	12	10	2	4	1	2	11	4	3	2	6	3	9	9	4	1	0	4	8	5	4	15	6	5	6	8	5	13	11	6	5	2	6	12	5	7	3	6
15	0	7	8	0	15	6	1	7	2	1	14	11	2	6	8	2	14	5	3	6	2	3	13	11	4	5	8	4	13	4	5	5	2	5	12	10	6	4	8	6	12	4	7	4	2	7	11	10
16	0	8	3	1	0	6	1	8	9	2	1	0	2	9	3	3	1	6	3	9	9	4	2	0	4	10	3	5	2	6	5	10	5	6	3	0	6	11	4	7	3	7	7	11	10	8	4	0
17	0	8	9	1	1	6	1	10	3	2	3	1	2	11	10	3	4	7	3	13	4	4	6	2	4	14	11	5	7	8	6	0	6	6	9	2	7	2	1	7	10	10	8	3	7	8	12	0
18	0	9	3	1	2	6	1	11	10	2	5	1	2	14	5	3	7	8	4	1	0	4	10	3	5	3	7	5	12	10	6	6	2	6	15	4	7	8	9	8	2	1	8	11	4	9	4	6
19	0	9	9	1	3	7	1	13	4	2	7	2	3	1	0	3	10	10	4	4	7	4	14	5	5	8	3	6	2	0	6	11	10	7	5	8	7	15	6	8	9	8	3	9	3	1	9	12	9
20	0	10	3	1	4	7	1	14	11	2	9	3	3	3	7	3	13	11	4	8	3	5	2	6	5	12	10	6	7	2	7	1	7	7	11	10	8	6	2	9	0	6	9	10	10	10	5	0
21	0	10	9	1	5	8	2	0	6	2	11	4	3	6	2	4	1	0	4	11	10	5	6	8	6	1	0	6	12	4	7	7	3	8	2	0	8	12	11	9	7	9	10	2	7	10	13	3
22	0	11	4	1	6	8	2	2	0	2	13	4	3	8	9	4	4	1	4	15	5	5	10	10	6	6	2	7	1	6	7	12	11	8	8	2	9	3	7	9	15	0	10	10	4	11	5	8
23	0	11	10	1	7	8	2	3	6	2	15	5	3	11	4	4	7	2	5	3	1	5	14	11	6	10	10	7	6	8	8	2	7	8	14	4	9	10	4	10	6	2	11	2	1	11	13	10
24	0	12	4	1	8	9	2	5	1	3	1	6	3	13	11	1	10	3	5	6	8	6	3	1	6	15	5	7	11	10	8	8	3	9	4	6	10	1	0	10	13	5	11	9	10	12	6	2
25	0	12	10	1	9	9	2	6	2	3	3	7	4	0	6	4	13	4	5	10	3	6	7	2	7	4	1	8	1	0	8	13	11	9	10	8	10	7	9	11	4	8	12	1	7	12	14	4
26	0	13	4	1	10	10	2	8	3	3	5	8	4	3	0	5	0	6	5	13	11	6	11	4	7	8	9	8	6	2	9	3	7	10	1	0	10	14	5	11	11	10	12	9	8	13	6	8
27	0	13	11	1	11	10	2	9	9	3	7	8	4	5	8	5	3	7	6	1	6	6	15	5	7	13	4	8	11	4	9	9	5	10	7	3	11	5	2	12	3	1	13	1	0	13	14	10
28	0	14	5	1	12	10	2	11	4	3	9	9	4	8	3	5	6	8	6	5	1	7	3	7	8	2	0	9	0	6	9	15	6	10	13	4	11	11	10	12	10	4	13	8	9	14	7	3
29	0	14	11	1	13	11	2	12	11	3	11	10	4	10	10	5	9	9	6	8	9	7	8	8	6	8	9	5	8	10	4	8	11	3	6	12	2	7	13	1	7	14	0	6	14	15	4	
30	0	15	5	1	14	11	2	14	5	3	13	11	4	13	4	5	12	10	6	12	4	7	11	10	8	11	4	9	10	10	10	10	4	11	9	8	12	9	4	13	8	9	14	8	3	15	7	8
31	1	0	0	2	0	0	3	0	0	4	0	0	5	0	0	6	0	0	7	0	0	8	0	0	9	0	0	10	0	0	11	0	0	12	0	0	13	0	0	14	0	0	15	0	0	16	0	0

Agriculture.

As crops depend on the existence of plant food and moisture in the soil so the character of the agriculture of a country depends largely on its soil and climate. It is true that geographical situation, the character of the people and other considerations have their influence which is not inconsiderable, but the limitations imposed by the nature of the soil and above all by the climate tend to the production of a certain class of agriculture under a certain given set of conditions.

The climate of India, while varying to some extent in degree, in most respects is remarkably similar in character throughout the country. The main factors in common are the monsoon, the dry winter and early summer months, and the intense heat from March till October. These have the effect of dividing the year into two agricultural seasons, the *Kharif* or Monsoon and the *Rabi* or Winter Season each bearing its own distinctive crops. From early June till October abundant rains fall over the greater part of the continent while the winter months are generally dry although North-Western India benefits from showers in December and January. The distribution of the rainfall throughout the year, which is of considerable importance to agriculture, is none too favourable, but is not quite so bad as is often represented. The rainfall is greatest at what would otherwise be the hottest time of the year, *viz.*, mid-summer and when it is most needed. It should be remembered that in a hot country intermittent showers are practically valueless as evaporation is very rapid. The distribution of rainfall such as is common in England, for example, would be of little use to Indian soils.

Soil.—For the purpose of soil classification India may be conveniently divided into two main areas in (1) The Indo-Gangetic plains, (2) Central and Southern India. The physical features of these two divisions are essentially different. The Indo-Gangetic plains (including the Punjab, Sind, the United Provinces, Bengal, Bihar and Assam) form large level stretches of alluvium of great depth. The top soil varies in texture from sand to clay, the greater part being a light loam, porous in texture, easily worked, and naturally fertile. The great depth of the alluvium tends to keep down the soil temperature. Central and Southern India on the other hand consist of hills and valleys. The higher uplands are too hot and too near the rock to be suitable for agriculture which is mainly practised in the valleys where the soil is deeper and cooler and moisture more plentiful. The main difference between the soils of the two tracts is in texture and while the greater part of the land in Northern India is porous and easily cultivated, and moist near to the surface large stretches in Southern and Central India consist of an intractable soil derived from the Deccan trap, sticky in the rains, hard and crumbly in the dry weather and holding its moisture at lower levels.

Agricultural Capital and Equipment.—India is a country of small holdings and the vast majority of the people cultivate patches varying in size from one to eight acres. Large holdings are practically unknown, and are mainly confined to the planting industries. Farming is carried on with a minimum of capital, there being practically no outlay on fencing, buildings, or implements. The accumulation of capital is prevented by the occurrence of famine and the high rate of interest and extravagance of expenditure in marriage celebrations. The organization of co-operative credit which has been taken in hand by Government and which has already proved successful in many provinces will undoubtedly lead to an increase in Agricultural capital.

Equipment.—For power the ryat depends chiefly on cattle which, as a rule, are light and active but possess little hauling power. The necessary tilth for crops is brought about by frequency of ploughings, the result being that the soil is seldom tilled as it should be. This is not chiefly due to want of knowledge on the part of the people but through want of proper equipment. The Indian agriculturist, as a rule, possesses an intimate though limited knowledge of the essentials of his own business, and fails, not only through ignorance, but also through lack of ways and means.

Implements are made of wood although ploughs are usually tipped with iron points and there is a great similarity in their shape and general design. The introduction of iron ploughs has made much progress in the last few years and many hundred thousand are now in use. The levelling beam is used throughout the greater part of the country in preference to the harrow and roller; and throughout Northern India the plough and the levelling beam are the only implements possessed by the ordinary cultivator.

In the heavier soils of the Deccan trap a cultivating implement consisting of a single blade, resembling in shape a Dutch hoe, is much used. Seed drills and drill hoes are in use in parts of Bombay and Madras but throughout the greater part of the country the seed is either broadcasted or ploughed in. Hand implements consist of various sizes of hoes, the best known of which are the *kodal* or spade with a blade set at an angle towards the labourer who does not use his feet in digging, and the *khurpi* or small hand hoe. Of harvesting machinery there is none, grain is separated either by treading out with oxen or beating out by hand, and winnowing by the agency of the wind.

Cultivation.—Cultivation at its best is distinctly good but in the greater part of the country it has plenty of room for improvement. As in any other country success in agriculture varies greatly with the character of the people, depending largely as it does on thrift and industry. In most places considering the large population cultivation is none too good. Agriculture suffers through lack of organization and equipment. Owing to the necessity of protection against thieves, in most parts the people live in villages, many of them at considerable distances from their land. Again, holdings, small though they are, have become sub-divided without any regard for convenience Preparatory tillage generally consists of repeated ploughings, followed as seed time approaches by harrowings with the levelling beam. The *Rabi* crops generally receive a more thorough cultivation than the *Kharif*, a finer seed bed being necessary owing to the dryness of the growing season. Manure is

AGRICULTURAL PRODUCE.

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1919-20. The sown area is always greater than the area of cultivated land, owing to double cropping. The figures represent acres :—

Province.	Rice.	Wheat.	Barley.	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute.	Total Area sown.	Net sown Area after deducting Area sown more than once.
Bengal .. .	20,940,000	116,100	92,500	1,427,700	22,576,300	1,475,700	274,200	50,100	2,458,900	28,800,300	24,469,800
Bihar and Orissa ..	15,260,400	1,144,600	1,353,600	9,510,700	27,269,300	2,082,600	275,000	78,300	203,700	31,914,000	25,616,000
Assam	4,431,007	..	..	183,745	4,614,752	337,491	32,210	31,960	137,337	6,182,511	5,640,616
United Provinces ..	6,573,917	7,100 910	4,429,601	19,486,749	37,591,177	578,879	1,414,212	1,271,471	..	43,513,920	35,563,247
Punjab	963,441	8,812,803	1,203,925	10,260.533	21,240,702	1,035,354	481,525	2,070,527	..	29,111,685	25,676,854
N. W. Frontier Province	36,376	1,025,479	269.177	1.026,576	2.357,608	72,994	33,787	50,657	..	2.675,141	2,312,365
Burma	10,651,727	67,592	1	1,022,674	11,741,994	1,477,783	44.013	437,053	..	15,769,290	15,189,497
Central Provinces and Berar.	5,071,351	3.199,349	16,089	10,265,02	18,551,816	1,854,515	19,569	4,599,575	.	25,895,206	23,669,297
Madras	11,648,286	17,398	2,375	18,196,639	29,864,698	2,685,105	176,243	2,339,296	..	38,209,903	33,105,152
Bombay and Sind ..	3,044,061	1,981,162	57,660	18,167,237	23,250,120	942,200	56,340	4,337,636	..	32,132,103	30,916,407
Minor Areas	85,537	64,407	93,808	364,977	608,729	28,683	6,329	51,514	..	795,476	705,827
Total .	78,706 103	23,529,800	7,518,736	89,912,557	199,667,196	12,571,304	2,813,428	15,318,089	2,799,937	254,999,540	222,865,062

generally applied to the maximum extent available, both to *Kharif* and to *Rabi* crops. Seeding is either done broadcast or by drilling behind a wooden plough or drill. Thinning and spacing are not nearly so well done as they might be, and intercultivation is generally too superficial. Harvesting is done by sickle where the crops are cut whole, and there is little waste involved. On the whole the methods of the ryot if carried out thoroughly would be quite satisfactory, but it is doubtful if this could be done with the number of cattle at his disposal.

Irrigation is necessary in order to grow full crops on the land, over the greater part of the country owing to insufficient rainfall and the vagaries of the monsoon. Canal irrigation has been greatly extended over the Punjab, Sind, United Provinces and Madras through Government canals which, in addition to securing the crops over existing cultivated land, have converted large desert tracts into fertile areas. The Punjab and parts of the United Provinces are naturally well suited to canal irrigation owing to the frequency of their rivers. The water is generally taken off at a point a little distance from where the rivers leave the hills and is conducted to the arid plains below. The main canal splits up into diverging branches, which again subdivide up into distributaries from which the village channels receive their supplies. Water rates are levied on the matured areas of crops, Government thus bearing a part of the loss in case of failure. Much of the land is supplied by what is termed flow irrigation, *i.e.*, the land is directly commanded by the canal water, but a great deal has to be lifted from one to three feet the canal running in such cases below the level of the land. Rates for lift irrigation are, of course, lower than those for flow.

Irrigation canals are generally classed into (1) perennial and (2) inundation canals. Perennial canals, which give supplies in all seasons generally have their headworks near the hills, thus commanding a great range of country. Farther from the hills, owing to the very gradual slope of the land and the lowness of the rivers in the cold weather, perennial irrigation is difficult and inundation canals are resorted to. These canals only give irrigation when the rivers are high. As a rule, in Northern India they begin to flow when the rivers rise owing to the melting of the snow on the hills in May and dry up in September

Irrigation from Wells.—About one-quarter of the total irrigation of the country is got from lifting water from wells ranging in depth from a few feet to over fifty feet. Their numbers have greatly increased in recent years largely through Government advances for their construction. The recurring cost of this form of irrigation has, however, greatly increased owing to the high price of draught cattle and the increasing cost of their maintenance.

Tank irrigation is common in Central and Southern India. Large quantities of rain water are stored in lakes (or tanks) and distributed during the drier seasons of the year. The system of distribution is the same as that by canal.

Manures.—Feeding of animals for slaughter being practically unknown in India, the amount of farm yard manure generally available in other countries from this source thus does not exist. This is partially if not entirely made up for by the large numbers required for tillage and the amount of cows and buffaloes kept for milk. Unfortunately fuel is very scarce and a greater part of the dung of animals has to be used for burning. Most of the trash from crops is used up for the same purpose and the net return of organic matter to the soil is thus insignificant. In some parts cakes of oil seed are used as manures for valuable crops like tea and sugarcane but in the greater part of the country the only manure applied is the balance of farm yard manure available after fuel supplies have been satisfied. Farm yard manure is particularly effective and its value is thoroughly appreciated but the people have much to learn in the way of storage of bulky manures and the conservation of urine.

Rice.—A reference to the crop statistics shows that rice is the most extensively grown crop in India, although it preponderates in the wetter parts of the country, *viz.*, in Bengal, Bihar and Burma and Madras. The crop requires for its proper maturing a moist climate with well assured rainfall. The cultivated varieties are numerous, differing greatly in quality and in suitability for various conditions of soil and climate, and the people possess an intimate acquaintance with those grown in their own localities. The better qualities are sown in seed beds and transplanted in the monsoon Broadcasted rice is grown generally in lowlying areas and is sown before the monsoon as it must make a good start before the floods arrive. Deep water rices grow quickly and to a great height and are generally able to keep pace with the rise in water level.

For transplanted rice the soil is generally prepared after the arrival of the monsoon and is worked in a puddle before the seedlings are transplanted. The land is laid out into small areas with raised partitions to regulate the distribution of the water supply. The seedlings are planted in small bunches containing from 4 to 6 plants each and are simply dibbled into the mud at distances of 6 to 12 inches apart. Where available, irrigation water is given at frequent intervals and the fields are kept more or less under water until the crop begins to show signs of ripening.

Wheat.—Wheat is grown widely throughout Northern India as a winter crop, the United Provinces and the Punjab supplying about two-thirds of the total area, and probably three-quarters of the total outturn in India. The majority of the varieties grown belong to the Species Triticium Vulgare. Indian wheats are generally white, red and amber coloured and are mostly classed as soft from a commercial point of view. The grains are generally plump and well filled but the samples are spoiled through mixtures of various qualities. Indian wheat is generally adulterated to some extent with barley and largely with dirt from the threshing floor and although there is a good demand in England and the Continent for the surplus produce, prices compare unfavourably with those obtained for Canadian and Australian produce. The crop is generally grown after a summer fallow and, except in irrigated tracts, depends largely on the conservation of the soil moisture from the previous monsoon.

AGRICULTURAL STATISTICS.

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	Acres.	Acres.	Acres.	Acres	Acres.	Acres.	Acres.
Net Area by professional survey	619,594,406	619,392,157	619,520,804	619,239,653	620,334,850	625,166,316	625,149,442
Area under forest	82,622,475	82,934,743	85,079,169	85,070,524	86,924,922	87,728,572	88,507,190
Not available for cultivation	147,169,102	145,427,217	143,930,260	143,441,598	142,782,768	146,798,628	145,586,198
Cultivable waste other than fallow	115,586,851	115,079,507	113,819,949	112,485,304	111,485,761	113,812,543	113,257,698
Fallow land	52,620,492	45,889,605	51,731,002	45,493,149	48,465,917	72,668,244	52,252,408
Net area sown with crops	219,191,773	227,682,179	221,778,167	229,620,075	227,847,771	201,384,391	222,865,062
Area irrigated	46,836,019	47,193,925	48,897,715	48,003,917	45,866,845	47,222,442	49,384,203
Area under Food-grains—							
Rice	76,907,895	77,668,882	78,679,425	80,988,124	80,667,619	77,613,377	78,706,103
Wheat	22,685,024	25,451,330	23,871,366	25,043,686	26,427,904	19,147,231	23,589,800
Barley	7,206,144	7,904,783	8,012,987	7,971,897	8,505,286	6,464,123	7,518,736
Jawar	21,405,397	21,223,398	23,050,921	21,891,980	21,117,771	20,537,466	22,484,034
Bajra	15,385,537	16,041,561	14,343,377	15,227,957	12,699,297	11,200,972	14,577,440
Ragi	4,370,676	4,250,788	4,338,380	4,072,166	4,265,211	4,004,356	4,229,016
Maize	6,166,939	6,187,729	6,735,325	6,544,212	6,485,508	6,063,510	6,658,696
Gram	9,296,672	14,364,490	13,558,533	15,699,021	16,724,034	7,647,075	12,940,459
Other grains and pulse	28,149,109	31,411,589	31,144,723	31,334,065	30,543,956	25,165,555	29,022,912
Total Food-grains	191,573,393	204,504,550	203,735,037	208,773,108	207,436,586	177,843,665	199,667,196
Area under other food-crops (including fruits, vegetables, spices, &c.).	8,124,809	8,200,367	8,307,725	8,410,432	8,330,477	8,095,384	8,492,586
Area under—							
Sugar	2,707,373	2,458,865	2,550,608	2,614,788	2,992,616	3,015,571	2,813,428
Coffee	85,723	86,712	91,003	90,602	95,311	98,222	95,815
Tea	572,106	584,979	593,364	603,510	618,922	688,034	701,443

Rains in January and February are generally beneficial but an excess of rainfall in these months usually produces rust with a diminution of the yield. On irrigated land 2 to 4 waterings are generally given. The crop is generally harvested in March and April and the threshing and winnowing go on up till the end of May. In good years the surplus crop is bought up at once by exporters and no time is lost in putting it on the European market as other supplies are at that time of year scarce. In years of famines the local price is generally sufficiently high to restrict exports.

The Millets.—These constitute one of the most important group of crops in the country, supplying food for the poorer classes and fodder for the cattle. The varieties vary greatly in quality, height and suitability to various climatic and soil conditions. Perhaps the two best known varieties are Jowar (*Sorghum vulgare*) tall growing with a large open head, and Bajra with a close rat-tail head and thin stem. Generally speaking the jowars require better land than the bajras and the distribution of the two crops follows the quality of the soil. Neither for jowar nor bajra is manure usually applied and cultivation is not so thorough as for wheat, the main objective being to produce a fine seed bed. The crop is generally sown in the beginning of the monsoon and so it requires to be thoroughly weeded. In the case of jowar, however, very large areas are sown as a *rabi* crop. It is often grown mixed with the summer pulses and other crops in which case thin seedings are resorted to. The subsidiary crops are harvested as they ripen either before the millet is harvested or afterwards. The produce is consumed in the country.

Pulses are commonly grown throughout India and the grain forms one of the chief foods of the people. Most kinds do well but are subject to failure or shortage of yield owing to a variety of circumstances among which rain at the time of flowering appears to be one of the most important. They are therefore more suitable to grow as mixed crops especially with cereals, and are generally grown as such. Being deep rooted and practically independent of a Nitrogen supply in the soil they withstand drought and form a good alternation in a cereal rotation. The chief crops under this heading are gram, mash, mung and moth, gram forming the main winter pulse crop while the others are grown in the summer. The pulses grow best on land which has had a good deep cultivation. A fine seed bed is not necessary. For gram especially the soil should be loose and well aerated. Indian pulses are not largely exported although they are used to some extent in Europe as food for dairy cows.

Cotton is one of the chief exports from India and the crop is widely grown in the drier parts of the country. The lint from Indian cotton is generally speaking short and coarse in fibre and unsuited for English mills. Japan and the Continent have, in the past, been the chief buyers. The crop is grown during the summer months and requires a deep moist soil and light rainfall for its proper growth. Rain immediately after sowing or during the flowering period is injurious. In parts of Central and Southern India the seed is sown in lines and the crop receives careful attention but over Northern India it is sown broadcast (often mixed with other crops) and from the date of sowing till the time of picking is practically left to itself. The average yield, which does not amount to more than 400 lbs. per acre of seed cotton, could doubtless be greatly increased by better cultivation.

Sugarcane.—Although India is not naturally as well suited for sugarcane growing as many other tropical countries, some 3½ millions of acres are annually sown. The crop is mostly grown in the submontane tracts of Northern India. The common varieties are thin and hard, yielding a low percentage of juice of fair quality, but cane of the highest quality and yield is grown in South India. In India white sugar is not made by the grower who simply boils down the juice and does not remove the molasses. The product called gur or gul is generally sold and consumed as such, although in some parts a certain amount of sugar-making is carried on. The profits, however, are small owing to the cheapness of imported sugar and there appears to be some danger to the crop if the present taste for gur were to die out. The question has been taken up by Government and a cane-breeding station has been recently opened near Coimbatore in Madras with the object of raising seedling canes and otherwise improving the supply of cane sets. A number of sugar factories of a modern type have been set up within recent years in Bihar and the United Provinces. The chief difficulty seems to be the obtaining of a sufficiently large supply of canes to offset the heavy capital charges of the undertakings.

Oilseeds.—The crops classified under this heading are chiefly sesamum, linseed and the cruciferous oilseeds (rape, mustard, etc.). Although oilseeds are subject to great fluctuation in price and the crops themselves are more or less precarious by nature—they cover an immense area.

Linseed requires a deep and moist soil and is thus grown chiefly in Bengal, Bihar, the United Provinces and the Central Provinces. The crop is grown for seed and not for fibre and the common varieties are of a much shorter habit of growth than those of Europe. The yield varies greatly from practically nothing up to 500 or 600 lbs. of seed per acre. The seed is mainly exported whole but a certain amount of oil pressing is done in the country.

Sesamum (or Gingelly) is grown mostly in Peninsular India as an autumn or winter crop. The seed is largely exported.

The Cruciferous Oilseeds form an important group of crops in Northern India where they grow freely and attain a fair state of development. They are one of the most useful crops in the rotation. They occupy the land for a few months only, and owing to their dense growth leave the soil clean and in good condition after their removal. A number of varieties are grown differing from each other in habit of growth, time of ripening, and size and quality of seed. The best known are rape, toria, and sarson. The crop is generally sown in September or early October and harvested from December to February. The crop is subject to the attack of aphis (green fly) at the time of flowering and sometimes suffers considerable damage from this pest. The seed

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	Acres.	Acres.	Acres.	Acres.	Acres	Acres	Acres.
Area under Oilseeds—							
Linseed	2,268,801	2,525,432	2,450,779	2.558,074	2,781,280	1,447,618	2,245,305
Sesamum (til)..	4,278,855	4,478,128	4,135,086	4,014,078	3.374.432	3,274.616	3 490,864
Rape and Mustard	4,083,135	4,144,374	4,075,575	4.010,944	4.358,909	3 058 648	3.679,789
Other Oilseeds..	4,027,236	4,185,657	3,574,149	4 052,492	3.593,756	2,731,753	3.155 346
Total Oilseeds ..	14,658,027	15,333.591	14,235,589	14,635,588	14,108,377	10,472,675	12,571,304
Area under—							
Cotton	15,844,363	15,221,787	11,435,135	13,836,667	15,403,088	14,440,560	15,318,089
Jute	3,135,585	3,308,718	2,349,381	2,671,302	2,700,324	2,472,634	2,709,937
Other fibres	915,383	976,142	787,351	830,540	887.676	576,331	746,440
Indigo	169,221	145,792	351,265	764,823	700,767	286,588	242,816
Opium	170,503	178,582	182,030	216.899	221,200	266,733	181,787
Tobacco	1,001,710	1,056,349	1,027,038	1,041,303	1,014,862	1,047,215	1,101,231
Fodder crops	5,910,087	6,362,511	7,076,258	8.173.058	8 193,925	7.227,846	8.206,286
Estimated yield* of—							
Rice (Cleaned) .. .. .. *tons.*	28,819,000	27,281.000	32,730,000	34 832,000	35,738,000	24,201,000	31,970.000
Wheat .. .. ,,	8,367.000	10,098,000	8,652,000	10,234,000	9 922,000	7,508,000	10,130,000
Coffee .. .. *lb.*	‡	‡	‡	‡	‡	‡	26,902.000
Tea † .. .. ,,	307,249,700	313,301,400	372,202,700	370,314.000	371.296,300	380,459.000	377,055,600
Cotton .. .. . 400 *lb. bales*	5,063,000	5,206,000	3,736.000	4,489,000	4,051,000	3,672.000	5.796.000
Jute † .. .. .. ,, ,,	8,893,900	10,443,900	7,341.800	8,309,300	8.867.200	6,955,700	8,482,500
Linseed .. .. *tons.*	386,200	397,000	476,000	526,000	515,000	235,000	419,000
Rape and Mustard .. .. . ,,	1,088,000	1,219,200	1,092,100	1,193,200	1,155,200	767,300	1,153,000
Sesamum (til).. .. .. .. ,,	403,500	551,000	482,000	513,000	382.200	278,000	449,000
Groundnut .. .. ,,	748,800	947,000	1,058,000	1,196,000	1,056,000	626,000	822,000
Indigo .. .. *cwt.*	26,800	25,200	55,100	95,700	127,000	48,600	37,700
Cane-sugar .. .. *tons.*	2,297,500	2,443,000	2,633,000	2,730,000	3,388,000	2,431,000	3,036,000

* The acreage of crops given in this table is for British India only, but the estimated yield includes the crops in certain of the Indian States.

† The statistics of the production of tea are for calendar years

‡ Return of production discontinued up to 1918-19.

is very subject to injury from rain and great care has to be taken in the drying. The produce is largely exported whole, but there is a considerable amount of local oil-pressing—the cake being in demand for feeding purposes.

Jute.—Two varieties of the plant are cultivated as a crop, Capsularis and Olitorius. Jute growing is confined almost entirely to Eastern Bengal, in the Ganges-Brahmaputra Delta. The crop requires a rich moist soil. Owing to river inundation this part of India receives a considerable alluvial deposit every year and the land is thus able to sustain this exhausting crop without manure. The crop is rather delicate when young, but once established requires no attention, and grows to a great height (10 to 11 feet). Before ripening the crop is cut and retted in water. After about three weeks submersion the fibre is removed by washing and beating. At the recent high range of prices jute may be considered to have been, for the last few years, the best paying crop in India.

Tobacco is grown here and there all over the country chiefly, however, in Bengal, Bihar, Bombay, Madras and Burma. Of two varieties cultivated Nicotiana Tabacum is by far the most common. Maximum crops are obtained on deep and moist alluvium soils and a high standard of cultivation including liberal manuring is necessary. The crop is only suited to small holdings where labour is plentiful as the attention necessary for its proper cultivation is very great. The seed is germinated in seed beds and the young plants are transplanted when a few inches high, great care being taken to shield them from the sun. The crop is very carefully weeded and hoed. It is topped after attaining a height of, say, 2 ft., and all suckers are removed. The crop ripens from February onwards and is cut just before the leaves become brittle. By varying the degree of fermentation of the leaves different qualities of tobacco are obtained. A black tobacco is required for *Hooka* smoking and this is the most common product but a certain amount of yellow leaf is grown for cigar making.

Live-stock consist mainly of cattle buffaloes and goats, horses not being used for agricultural purposes. Sheep are of secondary importance.

For draught purposes cattle are in more general use than buffaloes especially in the drier parts of the country, but buffaloes are very largely used in the low lying rice tracts. For dairying buffaloes are perhaps more profitable than cows as they give richer milk and more of it: but they require more feeding. The poorer people depend largely on the milk of goats of which there are an enormous number throughout India. Cattle breeding is carried on mainly in the non-cultivated tracts in Central and Southern India, Southern Punjab and Rajputana, where distinct breeds with definite characters have been preserved. The best known draught breeds are Hansi, Nellore, Amritmehal, Gujrat, Malvi, and the finest milk cows are the Sahiwal (Punjab) Gir (Kathiawar) and Sind. Owing, however, to the encroachment of cultivation on the grazing areas well-bred cattle are becoming scarce and some of the breeds are threatened with extinction. Efforts to improve the quality of the cattle in the non-breeding districts by the use of selected bulls have hitherto been frustrated by the promiscuous breeding which goes on in the villages.

Dairying.—Though little noticed, dairying forms a very large indigenous industry throughout India. The best known products are native butter (ghee) and cheese (dahi). During recent years a considerable trade in tinned butter has sprung up in Gujrat (Bombay Presidency). While pure *ghee* and milk can be procured in the villages, in the towns dairy products can scarcely be bought unadulterated.

AGRICULTURAL PROGRESS.

The Agricultural Departments in India as they now exist may be said to be a creation of the last twenty years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the Agricultural Departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the staff attached to the Government of India consisted of an Agricultural Chemist and a Cryptogamic Botanist, while trained Deputy Directors of Agriculture were employed only in Madras, Bombay and the United Provinces and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments were made, so that by March 1905 there were altogether 20 sanctioned agricultural posts; of these seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the Agricultural Departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the creation of an agricultural college teaching up to a three years' course in each of the larger provinces; and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, it was recognised, would largely exceed 20 lakhs a year. The Pusa Research Institute and College alone has cost nearly £150,000 including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's dis-

AREA, CULTIVATED and UNCULTIVATED, in 1919-20: IN EACH PROVINCE.

Provinces.	Area according to Survey.	*Deduct* Indian States.	NET AREA. According to Survey.	NET AREA. According to Village Papers.
	Acres.	Acres.	Acres.	Acres.
Bengal	53,824,158	3,476,638	50,347,520	50,347,520
Madras	97,851,028	6,802,773	91,048,255	89,76..,259
Bombay — Presidency.	85,724,352	37,006,400	48,717,952	48,717,952
Bombay — Sind	34,013,298	3,872,000	30,141,298	30,141,298
United Provinces — Agra	57,342,021	4,348,232	52,993,789	52,717,515
United Provinces — Oudh	15,306,720	....	15,306,720	15,484,059
Bihar and Orissa	71,184,523	18,334,720	52,849,803	52,849,803
Punjab	86,367,319	24,511,384	61,855,935	60,270,221
Burma — Upper *	63,162,682	3,375,130	59,787,552	59,787,552
Burma — Lower	55,183,184	....	55,183,184	55,183,184
Central Provinces	72,552,216	19,960,343	52,591,873	52,749,977
Berar	11,374,556	....	11,374,556	11,374,556
Assam	33,888,614	2,558,080	31,330,534	31,330,534
North-West Frontier Province.	8,578,606	140,800	8,437,806	8,571,461
Ajmer-Merwara	1,770,921	....	1,770,921	1,770,921
Delhi	368,138	....	368,138	368,138
Coorg	1,012,260	....	1,012,260	1,012,260
Manpur Pargana	31,346	....	31,346	31,346
TOTAL	749,535,942	124,386,50	625,149,142	622,468,556

* Includes Northern Shan States, for which estimates have been prepared for the first time.

Provinces.	CULTIVATED. Net Area actually Sown.	CULTIVATED. Current Fallows	UNCULTIVATED. Culturable Waste other than Fallow.	UNCULTIVATED. Not available for Cultivation.	Forests
	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	24,469,800	4,850,638	5,689,905	11,064,766	4,272,411
Madras	33,105,152	9,875,892	11,873,774	21,750,744	13,154,697
Bombay — Presidency.	26,847,220	6,538,054	993,041	5,806,206	8,533,431
Bombay — Sind	4,069,187	5,227,966	6,017,100	14,108,754	718,291
United Provinces — Agra	26,390,300	2,580,875	7,343,727	7,711,753	8,690,860
United Provinces — Oudh	9,172,947	636,714	2,841,045	2,220,416	612,937
Bihar and Orissa	25,616,000	5,192,194	6,803,752	8,127,226	7,110,631
Punjab	25,676,854	3,883,985	16,013,517	12,498,705	2,197,160
Burma — Upper	5,698,832	4,103,850	(*b*)10,562,640	(*a*)25,150,362	14,271,868
Burma — Lower	9,490,665	883,334	14,208,194	22,866,715	7,734,276
Central Provinces	16,930,849	3,538,312	13,815,384	3,941,818	14,723,614
Berar	6,738,448	1,406,431	134,778	956,780	2,138,119
Assam	5,640,616	2,898,300	13,762,158	5,510,500	3,518,960
North-West Frontier Province.	2,312,365	459,453	2,812,422	2,626,920	360,301
Ajmer-Merwara	341,389	192,290	301,915	838,545	96,782
Delhi	212,975	18,726	65,374	71,063	....
Coorg	144,474	164,866	11,690	334,045	357,185
Manpur Pargana	6,989	528	7,282	880	15,667
TOTAL	222,865,062	52,252,408	113,257,698	145,586,198	88,507,190

(*a*) Includes culturable waste in North Shan States. (*b*) Includes North Shan States.

posal by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the improvement of agricultural methods, in commemoration of the visit of Their Imperial Majesties to India.

Record of Progress.

At the beginning of 1921 there were over 100 posts in the Indian Agricultural Service, besides that of Agricultural Adviser to the Government of India, which replaced that of Inspector-General, the latter having been abolished at the end of the year 1911-12, the rapid advance of the provincial departments having rendered its continuance unnecessary The officers serving directly under the Government of India included the Director of the Pusa Institute, who was also Principal of the Agricultural College, a cotton specialist, two mycologists, two entomologists, two agricultural chemists and two economic botanists Some of these were supernumerary officers undergoing training. The provincial agricultural departments vary in strength. Generally speaking, each of the larger provinces has at least two or three Deputy-Directors of Agriculture (most provinces have more), an Agricultural Chemist and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the Agricultural Colleges), Assistant Agriculturists and Entomologists, Agricultural Inspectors, Superintendents of Farms, etc., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal, the United Provinces, the Punjab and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and has also been in the habit of giving short practical courses in subjects not at present taught in the provincial colleges. The Provincial Directors of Agriculture were for many years selected from the ranks of the Indian Civil Service, but are now usually expert agriculturists. They still in some provinces have other functions besides the supervision of the Agricultural Department; but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records. Proposals for the expansion and reorganisation of the Agricultural Department were formulated several years ago and have received much consideration and large developments have followed.

Work of the Departments.

The work of the Agricultural Department has two main aspects. On the one hand, by experiment and research, improved methods or crops are developed, or the means of combating a pest are worked out; on the other hand, ascertained improvements must be demonstrated and introduced as far as possible into the practice of the Indian cultivator. There is an essential difference between agricultural departments in the East and in the West in that, whereas the latter have arisen to meet the spontaneous demands of the cultivators of the soil, the former are entirely the creation of a government anxious to give all the assistance it can to its agricultural subjects. The demand for improved agriculture has not in India, except in special cases, come from the cultivator, and it is necessary for the Department to put forth every effort, first to ascertain the needs of the cultivators and then to demonstrate how they can most effectively be met. It is only a few years since work on modern lines was commenced by the reorganised agricultural departments, and, in the first place, a great deal of spade work had to be performed. An important advance in the direction of bringing the provincial agricultural departments more closely into touch with one another was made in 1905 by the creation of the Board of Agriculture. The Board, which includes the Imperial and provincial experts, meets biennially to discuss the programme of agricultural work, and agricultural questions generally, and makes recommendations which are submitted to the Government of India for consideration.

Machinery.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a demand for expert assistance to meet which Agricultural Engineers have been appointed in Bombay and several other Provinces to advise cultivators as to engines, pumps, threshing machinery, etc. Experiments have at various times and in various parts of India been made with steam ploughing machinery and since the war trials have been made with the petroleum driven tractors that were specially developed in England during the war. But while there is everywhere immense scope for the employment of the most modern machinery, progress is greatly hampered by the laissez faire attitude of the manufacturers of it. The reports of the Agricultural Departments constantly bear witness of this. Makers have generally no direct representatives in India being content with representation by agents in the large towns. There are no stocks of machinery in the country, spare parts are difficult to get and exorbitant prices are often charged for them.

Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators largely by the agricultural departments which have therefore to do a good deal of this work. Up to the present, the departments perform to a certain extent the functions of

AREA UNDER IRRIGATION IN 1919-20: IN EACH PROVINCE.

Provinces.	Total Area Sown.	Area Irrigated.				
		By Canals		By Tanks.	By Wells.	Other Sources.
		Government	Private.			
	Acres	Acres.	Acres	Acres.	Acres.	Acres.
Bengal..	28,800,300	128,611	178,912	833,311	11,848	674,173
Madras	(c) 38,209,908	3,754,972	193,556	3,756,103	1,547,590	880,570
Bombay { Presidency	27,718,894	221,575	51,114	109,460	619,517	30,840
Bombay { Sind .	4,413,209	2,973,451	12,675	....	52,078	179,565
United Provinces { Agra ..	(b) 31,661,919	2,673,779	18,981	67,450	4,133,831	1,292,133
United Provinces { Oudh .	11,852,001	..	..	..	1,736,280	933,934
Bihar and Orissa ..	31,914,000	947,558	861,421	1,797,071	748 998	1,452,980
Punjab .. .	29,111,685	8,704,431	489,577	17,816	3,536,265	180,782
Burma { Upper .	6,194,941	528,375	202,708	158,435	14,683	121,435
Burma { Lower .	9,574,349	111	48,787	3,351	2,791	168,479
Central Provinces ..	19,124,716	216,440	961	590,868	85,282	40,000
Berar	6,770,490	..	..	166	29,564	667
Assam	6,182,511	120	161,255	..	..	42,250
North-West Frontier Province	2,675,111	360,558	429,091	..	68,605	113,221
Ajmer-Merwara ..	396,582	..	..	36,259	95,476	89
Delhi	244,272	37,613	..	422	18,977	..
Coorg	147,150	2,291	..	1,555	..	..
Manpur Pargana ..	7,472	..	..	..	78	..
TOTAL ..	254,999,540	20,549,894	2,649,061	7,372,267	12,701,863	6,111,118

(c) Includes 9,441 acres in North Arcot for which details are not available.

(b) Includes 342,392 acres in the Agra province for which details are not available.

Provinces.	Area Irrigated.	Crops Irrigated. *				
	Total Area Irrigated.	Rice.	Wheat	Barley	Jawar or cholum (great millet)	Bajra or cumbu (spiked millet.)
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	1,826,878	1,612,151	11,717	3,232	100	300
Madras	10,132,791	8,571,144	3,186	15	581,469	348,708
Bombay { Presidency .	1,032,506	173,180	187,115	14,292	188,034	88,551
Bombay { Sind .	3,217,769	1,112,863	392,364	27,921	546,128	502,191
United Provinces { Agra ..	8,186,174	391,855	2,670,573	1,812,529	48,164	7,677
United Provinces { Oudh ..	2,670,214	37,832	1,261,098	519,986	151	50
Bihar and Orissa ..	5,808,028	3,795,276	300,210	145,703	1,550	1,857
Punjab	12,928,871	745,117	4,876,745	368,537	201,735	259,534
Burma { Upper ..	1,025,636	1,025,326	13	..	..	..
Burma { Lower ..	223,522	206,156	..	..	..	..
Central Provinces ..	933,551	815,676	40,291	2,401	161	
Berar	30,397	149	3,964	94	137	..
Assam	203,625	191,417	20	..	..	..
North-West Frontier Province	971,478	36,292	318,913	111,031	26,370	8,021
Ajmer-Merwara ..	131,821	122	18,867	48,069	5,733	794
Delhi	57,012	93	20,538	5,230	1,682	255
Coorg	3,849	3,849	..	..	..	..
Manpur Paragana ..	78	..	57	..	..	..
TOTAL ..	49,384,203	18,718,498	10,105,701	3,059,040	1,601,414	1,217 939

* Includes the area irrigated at both harvests.

Provinces	Crops Irrigated. *						
	Maize.	Other cereals and pulses.	Sugar cane	Other Food crops	Cotton.	Other Non-food crops.	Total
	Acres.	Acres	Acres	Acres	Acres.	Acres	Acres.
Bengal	550	111,069	63,760	154,271	427	135,876	2,093,483
Madras	4,091	1,384,874	78,631	336,692	131,130	628,470	12,068,410
Bombay — Presidency.	44,152	94,433	47,180	137,672	9,079	200,170	1,183,858
Bombay — Sind ..	2,273	206,653	4,156	52,096	310,454	189,188	3,346,587
United Provinces — Agra .	172,553	1,819,584	867,152	231,280	461,400	393,071	a8,911,738
United Provinces — Oudh ..	940	572,670	172,594	55,160	56	94,533	2,715,070
Bhiar and Orisa ..	84,598	959,066	190,232	217,722	6,700	105,114	5,808,028
Punjab	525,116	1,027,237	387,985	178,107	1,835,913	2,808,423	13,214,449
Burma .. Upper ..	..	9,140	1,044	52,120	.	794	1,088,137
Burma .. Lower ..	..	..	1,247	10,108	..	6,520	224,031
Central Provinces ..	49	3,879	15,531	52,131	373	3,058	933,551
Berar	154	442	1,312	20,372	..	3,773	30,397
Assam	..	3,807	..	7,740	..	641	203,625
North-West Frontier Province.	242,429	23,077	33,639	25,866	40,835	107,398	973,871
Ajmer-Merwara ..	25,375	7,792	415	9,662	27,588	5,475	149,892
Delhi	977	4,804	5,625	1,142	3,416	10,399	57,161
Coorg	..	..	..	..	..	..	3,849
Manpur Paragana ..	..	21	..	..	..	..	78
TOTAL ..	1,103,257	6,228,548	1,870,503	1,545,141	2,827,371	4,693,203	53,006,515

* Includes the area irrigated at both harvests.

(*a*) Includes 35,900 acres for which details are not available.

dealers in implements, but it is becoming difficult to control the work as the area covered by the introduction is gradually becoming large.

Particular Crops.

Cotton from the first received much of the attention of the new departments. Very striking results have already been achieved, both with Cambodia and other exotic varieties and with the improvement of the types already grown. The Government of India appointed in 1917 a special committee to investigate and recommend measures for the improvement and increase of Indian cotton production. Its president was the Agricultural Adviser to the Government of India, and its other five members represented not only government departmental experts but representatives of the trade in Bombay and Lancashire. The Committee devoted several months to travelling throughout the cotton growing tracts and holding inquiries in the cities and in 1919 presented a valuable report reviewing the general Indian cotton situation, indicating the general lines which sound advance must pursue and recommending important steps to improve the organisation of supervision and assistance for the benefit of cultivators and the trade. Many of the suggestions of their report have now been brought into practice.

Wheat also has been the subject of prolonged experiments. One of the first results of the investigations carried out at Pusa was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheats on the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw.

Another crop with which considerable success has been attained is **Ground-nut**, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity.

In 1919 the Government of India appointed a powerful Committee to investigate and recommend measures for the improvement of Indian sugar-cane and the development of the Industry. This Committee travelled throughout India, and also went to Java, and their report was published in 1921.

Fruit cultivation has been the object of much encouraging attention from the departmental officials in Baluchistan, the temperate regions of the Himalayan slopes and elsewhere and valuable work has been done in the investigation of fruit disease and insects injurious to fruit by special officers of the scientific branches of the Department.

Fodder cultivation on modern lines has received a good deal of attention during the past few years, especially in the Bombay Presidency, where special steps have been taken to develop it under famine conditions and to utilise cactus as fodder in famine years.

Cattle Breeding which is in a very backward state in India has received great attention in all provinces of India, both to improve breeds and to induce the people to devote more care to a problem so closely wrapped up with their welfare. In the latter direction success has been limited, but in the former most valuable results have been obtained. A typical example is the case of the special breeding of milch cattle at the Government of India farm at Pusa and at other farms associated with it in this work. In one herd of country cattle, strict selection for milk yield has rendered possible the elimination from the herd of all cows giving less than 3,500 lb. of milk in the lactation period of 10 months from calving. In another herd records concerning hundreds of animals during ten years have shown that a cross of a well bred Ayrshire bull with an Indian cow will double the milk yield of the Indian breed. One cow of this kind at Pusa gave 10,000 lb. of milk in one year.

AREA UNDER DIFFERENT CROPS CULTIVATED IN 1919-20 IN EACH PROVINCE.

Provinces	Rice.	Wheat.	Barley.	Jawar or Cholum (Great Millet).	Bajra or Cumbu (Spiked Millet).	Ragi or Marua (Millet).
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	21,940,000	116,100	92,500	4,300	2,800	7,400
Madras	11,648,285	17,398	2,375	5,497,575	3,264,955	2,479,404
Bombay .. Presidency ..	1,931,197	1,416,619	25,611	7,802,888	4,506,419	592,674
Bombay .. Sind ..	1,112,864	564,513	32,049	694,080	954,873	722
United Provinces. Agra ..	4,203,586	5,101,492	3,273,303	1,961,764	2,197,274	179,650
United Provinces. Oudh ..	2,370,331	1,999,418	1,156,298	367,856	498,090	60,979
Bihar and Orissa	15,260,400	1,144,609	1,353,606	88,200	64,800	844,700
Punjab	993,141	8,812,803	1,203,925	1,020,014	2,675,056	25,897
Burma .. Upper ..	2,174,431	67,585	1	610,683	....	500
Burma .. Lower ..	8,477,296	7	....	352	....	....
Central Provinces ..	5,029,767	2,299,656	15,995	1,933,949	37,025	15,232
Berar	41,584	199,693	94	2,430,856	104,113	520
Assam	4,431,007	....	....	....	....	15,000
North-West Frontier Province.	36,376	1,025,479	269,177	75,096	169,336	....
Ajmer-Merwara	1,244	23,755	74,901	43,924	41,493	132
Delhi	95	40,134	18,907	38,180	61,186	12
Coorg	84,127	....	....	8	....	6,194
Manpur Pargana	71	518	....	3,399	20	....
TOTAL ..	78,703,703	23,529,800	7,518,736	22,484,034	14,577,440	4,229,016

Provinces.	Maize	Gram (pulse).	Other Food Grains and Pulses.	Total Food Grains and Pulses	Linseed.	Sesamum (Til or Jinjili).
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	88,000	147,300	1,177,900	22,576,300	137,000	209,900
Madras	109,290	117,033	6,728,382	29,864,698	9,695	880,850
Bombay .. Presidency ..	224,280	548,193	2,535,045	19,582,956	119,313	186,986
Bombay .. Sind ..	2,276	120,631	274,256	3,667,164	1	30,182
United Provinces Agra ..	1,527,871	3,715,765	4,447,865	26,008,570	173,824	146,992
United Provinces Oudh ..	905,693	1,231,192	2,392,749	10,982,607	56,602	20,654
Bihar and Orissa ..	1,773,000	1,515,400	5,224,600	27,269,300	727,100	192,600
Punjab	1,155,515	4,125,000	1,259,051	21,240,702	31,108	110,200
Burma .. Upper ..	155,649	60,062	146,407	3,215,318	58	1,076,755
Burma .. Lower ..	23,383	21,770	3,868	8,526,676	286	112,107
Central Provinces ..	158,651	979,785	3,938,342	15,108,402	959,102	432,980
Berar	2,729	66,849	596,976	3,443,414	18,587	56,171
Assam	980	*	167,765	4,614,752	12,005	10,673
North-West Frontier Provinces.	453,878	239,552	88,714	2,357,608	73	3,185
Ajmer-Merwara	72,480	21,102	30,513	309,544	498	20,099
Delhi	3,920	30,183	8,281	200,898	....	46
Coorg	....	120	1,921	92,370	....	278
Manpur Pargana	1,101	522	286	5,917	73	206
TOTAL ..	6,658,696	12,940,459	29,022,912	199,667,196	2,245,305	3,490,864

* Included under "Other Food Grains and Pulses."

AREA UNDER DIFFERENT CROPS CULTIVATED IN 1919-20 IN EACH PROVINCE.

Provinces.	Rape and Mustard.	Groundnut.	Other Oil-Seeds.	Total Oil-Seeds.	Condiments & Spices.	Sugar Cane.	Sugar Others†.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	1,100,000	..	28,800	1,475,700	152,800	217,900	56,300
Madras	40,751	1,144,071	609,738	2,685,105	7 2,063	92,722	83,521
Bombay { Presidency..	7,208	136,136	238,381	688,024	201,128	48,965	761
Bombay { Sind ..	211,069	1	12,023	254,176	7,999	4,156	2,458
United Provinces { Agra ..	103,970	1,151	20,509	446,445	110,852	1,189,059	..
United Provinces { Oudh ..	51,746	2,930	501	132,433	17,717	225,153	..
Bihar and Orissa ..	827,100	..	335,800	2,082,600	80,500	274,800	200
Punjab	890,913	..	3,133	1,035,354	47,111	481,525	..
Burma { Upper ..	5,317	274,415	27	1,356,572	93,180	6,212	21,861
Burma { Lower ..	2,676	6,149	13	121,211	36,186	15,582	358
Central Provinces ..	49,2 0	4,712	291,810	1,742,814	59,561	17,806	445
Berar	538	2,678	31,727	111,701	26,782	1,318	..
Assam	314,813	..	..	337,491	..	32,210	..
North-West Frontier Province.	67,215	..	2,191	72,994	4,852	33,787	..
Ajmer-Merwara ..	226	..	133	20,956	3,483	415	..
Delhi	6,852	..	67	6,965	1,286	5,804	..
Coorg	23	..	50	351	3,789	105	..
Manpur Pargana ..	132	..	..	411	..	5	..
TOTAL ..	3,679,789	1,572,243	1,583,103	12,571 304	1,619,569	2,647,524	165,904

† Area under sugar-yielding plants other than sugarcane.

Provinces	Cotton.	Jute.	Other Fibres.	Total Fibres.	Indigo.	Other Dyes.
	Acres	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	50,100	2,458,900	4 ,800	2,557,800	11,700	..
Madras	2,339,293	..	170,365	2,509,661	101,300	1,626
Bombay .. { Presidency ..	4,025,537	..	111,357	4,136,894	36	467,475
Bombay .. { Sind ..	312,099	..	689	312,788	1,457	590
United Provinces { Agra ..	1,197,928	..	147,292	1,345,220	42,762	432
United Provinces { Oudh ..	73,543	..	36,226	109,769	6,076	129
Bihar and Orissa	78,300	203,700	32,700	314,700	57,100	7,100
Punjab	2,070,527	..	49,459	2,119,986	22,019	5,043
Burma .. { Upper ..	372,316	..	493	372,809	309	42
Burma .. { Lower ..	64,737	..	599	65,336	1	..
Central Provinces	1,484,359	..	102,806	1,587,165	42	54
Berar	3,115,216	..	43,810	3,159,026	2	21
Assam	31,960	137,337	..	169,297	..	..
North-West Frontier Province.	50,657	..	1 207	51,864	6	13
Ajmer-Merwara	45,472	..	64	45,536	2	..
Delhi	4,907	..	528	5,435	4	..
Coorg	35	..	13	48	..	..
Manpur Pargana	1,100	..	32	1,132	..	..
TOTAL ..	15,318,089	2,799,937	746,440	18,864,466	242,816	482,525

AREA UNDER DIFFERENT CROPS CULTIVATED IN 1919-20 IN EACH PROVINCE.

Administrations.	Opium.	Tea.	Coffee.	Tobacco.	Other Drugs and Narcotics.	Fodder Crops.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	..	173,200	..	342,500	4,800	114,400
Madras	..	44,598	53,893	228,222	139,567	3 3,338
Bombay .. Presidency ..	..	112	96	100,109	25,936	1,887,516
Bombay .. Sind ..	..	..	..	6,454	112	84,235
United Provinces Agra ..	82,822	7,915	..	68,582	1,474	998,543
United Provinces Oudh ..	80,281	..	..	13,192	1,541	167,227
Bihar and Orissa	..	2,100	..	120,300	..	33,700
Punjab	1,660	9,799	..	53,617	1,514	3,772,742
Burma .. Upper ..	16,993	50,625	87	40,232	1,014	220,848
Burma .. Lower ..	..	20	..	85,817	36,569	3,748
Central Provinces	..	..	..	12,454	184	495,883
Berar	..	..	..	10,572	..	392
Assam	..	411,999	..	9,985	..	..
North-West Frontier Province.	..	..	..	8,061	80	92,487
Ajmer-Merwara	31	..	..	72	..	4,345
Delhi	..	..	..	967	..	16,882
Coorg	..	1,075	41,739	95	237	..
Manpur Pargana	..	..	..	..	..	..
TOTAL ..	181,787	701,443	95,815	1,101,231	212,528	8 206,286

Administrations.	Fruits and Vegetables, including Root Crops.	Miscellaneous Crops.		Total Area Sown.	*Deduct* Area Sown more than once.	Net Area Sown.
		Food.	Non-Food.			
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Bengal	606,400	315,600	165,400	28,800,300 (c)	4,330,500	24,469,800
Madras	1,121,615	33,694	154,844	38,209,908	5,104,756	33,105,152
Bombay .. Presidency	574,210	2,593	1,783	27,718,894	871,674	26,847,220
Bombay .. Sind ..	44,561	85	26,974	4,413 209 (b)	344,022	4,069,187
United Provinces Agra ..	317,268	93,420	6,162	31,661,919	5,271,619	26,390,300
United Provinces Oudh ..	114,486	923	467	11,852,001	2,879,054	9,172,947
Bihar and Orissa	760,600	615,700	295,900	31,914,000	6,298,000	25,616,000
Punjab	246,032	51,685	22,896	29,111,685	3,434,831	25,676,854
Burma .. Upper ..	788,200	4,540	6,099	6,194,941	496,109	5,698,832
Burma .. Lower ..	502,336	8,083	172,426	9,574,349	83,684	9,490,665
Central Provinces	97,398	2,142	366	19,124,716	2,193,867	16,930,849
Berar	16,018	990	274	6,770,490	32,042	6,738,448
Assam	453,563	(a)	153,214	6,182 511	541,895	5,640,616
North-West Frontier Province.	26,841	25,395	1,153	2,675,141	362,776	2,312,365
Ajmer-Merwara	1,256	5,215	5,727	396,582	55,193	341,389
Delhi	5,068	352	611	244,272	31 297	212,975
Coorg	7,341	..	..	147,150	2,676	144,474
Manpur Pargana	..	7	..	7,472	483	6,989
TOTAL ..	5,683,193	1,189,824	1,014,296	254,999,540	32,134,478	222,865,062

(c) Included under non-food crops.
(b) Includes 342,392 acres in the Agra province for which details are not available.
(c) Included 9,441 acres in North Arcot for which details are not available.

The following is a summary of the various crop forecasts relating to the season 1920-21 issued by the Department of Statistics, India :—

Crop.	Tracts comprised in the figures and percentage of total Indian crop represented by them.	Estimated Area.	Per cent. of preceding year (100= final figure of preceding year).	Estimated outturn.	Per cent. of preceding year (100= final figure of preceding year.)
		Acres.			
Jute*	Bengal Bihar and Orissa, and Assam (100 per cent. of the total Jute area in India.)	1,513,000	60	4,053,000 bales.	68
Sugarcane ..	U. P., Punjab,† Bihar and Orissa, Bengal Madras, Bombay and Sind,† Assam, N.-W. F. Province, C. P. and Berar, Delhi and Baroda (99 per cent. of total sugarcane area of British India.)	2,426,000	95	(a)	(a)
Cotton ..	All cotton growing tracts. ..	17,855,000	85	4,330,000	121
Sesamum ..	U. Provinces, Madras, C. P. and Berar, Bombay and Sind†, Bengal, Bihar and Orissa, Punjab, Ajmer-Merwara, Baroda and Kotah (Rajputana) (74 per cent. of the total sesamum area of British India).	2,698,000	63‡	(a)	(a)
Indigo ..	Madras, United Provinces, Bihar and Orissa, Punjab, Bengal, Bombay, † and Sind† (containing practically the entire area under indigo in British India.)	316,600	132	60,900 cwts.	148
Groundnut ..	Madras, Burma and Bombay † (99 per cent of the total Ground nut area of British India).	1,502,000	76	(a)	(a)
Rice	Bengal, Bihar and Orissa, Madras, Burma, United Provinces,† C. P. and Berar,† Assam, Bombay, and Sind† Baroda Hyderabad (99 per cent. of the total rice area of British India.)	79,154,000	101	(a)	(a)

* Issued by the Director of Agriculture, Bengal.

† Including Indian States.

‡ The percentage is 121, if compared with the estimates at the corresponding date of last year.

(a) Not yet available.

Meteorology.

The meteorology of India like that of other countries is largely a result of its geographical position. The great land area of Asia to the northward and the enormous sea expanse of the Indian Ocean to the southward are determining factors in settling its principal meteorological features. When the Northern Hemisphere is turned away from the sun, in the northern winter, Central Asia becomes an area of intense cold. The meteorological conditions of the temperate zone are pushed southward and we have over the northern provinces of India the westerly winds and eastward moving cyclonic storms of temperate regions, while, when the Northern Hemisphere is turned towards the sun, Southern Asia becomes a super heated region drawing towards it an immense current of air which carries with it the enormous volume of water vapour which it has picked up in the course of its long passage over the wide expanse of the Indian Ocean, so that at one season of the year parts of India are deluged with rain and at another persistent dry weather prevails.

Monsoons.—The all-important fact in the meteorology of India is the alternation of the seasons known as the summer and winter monsoons. During the winter monsoon the winds are of continental origin and hence, dry, fine weather, clear skies, low humidity and little air movement are the characteristic features of this eason. The summer rains cease in the provinces of the North-West Frontier Province and the Punjab about the middle of September after which cool westerly and northerly winds set in over that area and the weather becomes fresh and pleasant. These fine weather conditions extend slowly eastward and southward so that by the middle of October, they embrace all parts of the country except the southern half of the Peninsula, and by the end of the year have extended to the whole of the Indian land and sea area, the rains withdrawing to the Equatorial Belt. Thus the characteristics of the cold weather from October to February over India are:—Westerly winds of the temperate zone over the extreme north of India; to the south of these the north-east winds of the winter monsoon or perhaps more properly the north-east Trades and a gradually extending area of fine weather which, as the season progresses, finally embraces the whole Indian land and sea area. Two exceptions to these fine weather conditions exist during this period, *viz.*, the Madras coast and the north-west of India. In the former region the north-east winds which set in over the Bay of Bengal in October coalesce with the damp winds of the retreating summer monsoon, which current curves round over the Bay of Bengal, and, blowing directly on to the Madras coast gives to that region the wettest and most disturbed weather of the whole year, for while the total rainfall for the four months June to September, *i.e.*, the summer monsoon, at the Madras Observatory amounts to 15.36 inches the total rainfall for the three months October to December amounts to 29.48 inches. The other region in which the weather is unsettled, during this period of generally settled conditions, is North-west India. This region during January, February and part of March is traversed by a succession of shallow storms from the westward. The number and character of these storms vary very largely from year to year and in some years no storms at all are recorded. In normal years, however, in Northern India periods of fine weather alternate with periods of disturbed weather (occurring during the passage of these storms) and light to moderate and even heavy rain occurs. In the case of Peshawar the total rainfall for the four months, December to March, amounts to 5.26 inches while the total fall for the four months, June to September, is 4.78 inches, showing that the rainfall of the winter is, absolutely, greater in this region than that of the summer monsoon. These two periods of subsidiary "rains" are of the greatest economic importance. The fall in Madras is, as shown above, of considerable actual amount, while that of North-west India though small in absolute amount is of the greatest consequence as on it largely depend the grain and wheat crops of Northern India.

Spring Months.—March to May and part of June form a period of rapid continuous increase of temperature and decrease of barometric pressure throughout India. During this period there occurs a steady transference northward of the area of greatest heat. In March the maximum temperatures, slightly exceeding 100, occur in the Deccan; in April the area of maximum temperature; between 100° and 105°, lies over the south of the Central Provinces and Gujarat; in May maximum temperatures, varying between 105° and 110°, prevail over the greater part of the interior of the country while in June the highest mean maximum temperatures exceeding 110° occur in the Indus Valley near Jacobabad. Temperatures exceeding 120° have been recorded over a wide area including Sind, Rajputana: the West and South Punjab and the west of the United Provinces, but the highest temperature hitherto recorded is 126° registered at Jacobabad on June 12th, 1897. During this period of rising temperature and diminishing barometric pressure, great alterations take place in the air movements over India, including the disappearance of the north-east winds of the winter monsoon, and the air circulation over India and its adjacent seas, becomes a local circulation, characterised by strong hot winds down the river valleys of Northern India and increasing land and sea winds in the coast regions. These land and sea winds, as they become stronger and more extensive, initiate large contrasts of temperature and humidity which result in the production of violent local storms. These take the forms of dust storms in the dry plains of Northern India and of thunder and hailstorms in regions where there is inter-action between damp sea winds and dry winds from the interior. These storms are frequently accompanied with winds of excessive force, heavy hail and torrential rain and are on that account very destructive.

By the time the area of greatest heat has been established over North-west India, in the last week of May or first of June, India has become the seat of low barometric pressures relatively to the adjacent seas and the whole character of the weather changes. During

the hot weather period, discussed above, the winds and weather are mainly determined by local conditions. Between the Equator and Lat. 30° or 35° south the wind circulation is that of the south-east trades, that is to say from about Lat. 30°-35° south a wind from south-east blows over the surface of the sea up to about the equator. Here the air rises into the upper strata to flow back again at a considerable elevation to the Southern Tropic or beyond. To the north of this circulation, i.e., between the Equator and Lat. 20° to 25° North, there exists a light unsteady circulation, the remains of the north-east trades, that is to say about Lat. 20° North there is a north-east wind which blows southward till it reaches the thermal equator where side by side with the south-east Trades mentioned above, the air rises into the upper strata of the atmosphere. Still further to the northward and in the immediate neighbourhood of land there are the circulations due to the land and sea breezes which are attributable to the difference in the heating effect of the sun's rays over land and sea. It is now necessary to trace the changes which occur and lead up to the establishment of the south-west monsoon period. The sun at this time is progressing slowly northward towards the northern Tropic. Hence the thermal equator is also progressing northward and with it the area of ascent of the south-east trades circulation. Thus the south-east trade winds cross the equator and advance further and further northward, as the thermal equator and area of ascent follows the sun in its northern progress. At the same time the temperature over India increases rapidly and barometric pressure diminishes, owing to the air rising and being transferred to neighbouring cooler regions—more especially the sea areas. Thus we have the southern Trades circulation extending northward and the local land and sea circulation extending southward until about the beginning of June the light unsteady interfering circulation over the Arabian Sea finally breaks up, the immense circulation of the south-east Trades, with its cool, moisture laden winds rushes forward, becomes linked on to the local circulation proceeding between the Indian land area and the adjacent seas and India is invaded by oceanic conditions—the **south-west monsoon** proper. This is the most important season of the year as upon it depends the prosperity of at least five-sixths of the people of India.

When this current is fully established a continuous air movement extends over the Indian Ocean, the Indian seas and the Indian land area from Lat. 30° S. to Lat. 30° N. the southern half being the south-east trades and the northern half the south-west monsoon. The most important fact about it is that it is a continuous horizontal air movement passing over an extensive oceanic area where steady evaporation is constantly in progress so that where the current enters the Indian seas and flows over the Indian land it is highly charged with aqueous vapours.

The Current enters the Indian seas quite at the commencement of June and in the course of the succeeding two weeks spreads over the Arabian Sea and Bay of Bengal up to their extreme northern limits. It advances over India from these two seas. The Arabian sea current blows on to the west coast and sweeping over the Western Ghats prevails more or less exclusively over the Peninsula, Central India, Rajputana and north Bombay. The Bay of Bengal current blows directly up the Bay. One portion is directed towards Burma, East Bengal and Assam while another portion curves to south at the head of the Bay and over Bengal, and then meeting with the barrier of the Himalayas curves still further and blows as a south-easterly and easterly wind right up the Gangetic plain. The south-west monsoon continues for three and a half to four months, *viz.*, from the beginning of June to the middle or end of September. During its prevalence more or less general though far from continuous rain prevails throughout India the principal features of the rainfall distribution being as follows. The greater portion of the Arabian Sea current, the total volume of which is probably three times as great as that of the Bengal current, blows directly on to the west coast districts. Here it meets an almost continuous hill range, is forced into ascent and gives heavy rain alike to the coast districts and to the hilly range, the total averaging about 100 inches most of which falls in four months. The current after parting with most of its moisture advances across the Peninsula giving occasional uncertain rain to the Deccan and passes out into the Bay where it coalesces with the local current. The northern portion of the current blowing across the Gujarat, Kathiawar and Sind coasts gives a certain amount of rain to the coast districts and frequent showers to the Aravalli Hill range but very little to Western Rajputana, and passing onward gives moderate to heavy rain in the Eastern Punjab, Eastern Rajputana and the North-west Himalayas. In this region the current meets and mixes with the monsoon current from the Bay.

The monsoon current over the southern half of the Bay of Bengal blows from south-west and is thus directed towards the Tenasserim hills and up the valley of the Irrawady to which it gives very heavy to heavy rain. That portion of this current which advances sufficiently far northward to blow over Bengal and Assam gives very heavy rain to the low-lying districts of East Bengal and immediately thereafter coming under the influence of the Assam Hills is forced upwards and gives excessive rain (perhaps the heaviest in the world) to the southern face of these hills. The remaining portion of the Bay current advances from the southward over Bengal, is then deflected westward by the barrier of the Himalayas and gives general rain over the Gangetic plain and almost daily rain over the lower ranges of the Himalayas from Sikhim to Kashmir.

To the south of this easterly wind of the Bay current and to the north of the westerly wind of the Arabian Sea current there exists a debatable area running roughly from Hissar in the Punjab through Agra, Allahabad and part of Chota Nagpur to Orissa, where neither current of the monsoon prevails. In this area the rainfall is uncertain and would probably

be light, but that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and to give it heavy falls of occasional rain.

The Total Rainfall of the monsoon period (June to September) is 100 inches over part of the west coast, the amount diminishes eastward, is below 20 inches over a large part of the centre and east of the Peninsula and is only 5 inches in South Madras; it is over 100 inches on the Tenasserim and South Burma coast and decreases to 20 inches in Upper Burma; it is over 100 in the north Assam Valley and diminishes steadily westward and is only 5 inches in the Indus Valley.

The month to month distribution for the whole of India is:—

May	.. 2·6	inches
June	.. 8·3	,,
July	..11·9	,,
August	..10·5	,,
September	.. 7·2	,,
October	.. 3·2	,,

Cyclonic storms and cyclones are an almost invariable feature of the monsoon period. In the Arabian Sea they ordinarily form at the commencement and end of the season, *viz.*, May and November, but in the Bay they form a constantly recurring feature of the monsoon season. The following gives the total number of storms recorded during the period 1877 to 1901 and shows the monthly distribution:—

	Jan.	Feb.	Mar.	Apl.	May	June
Bay of Bengal ..	..	..	1	4	13	28
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Bay of Bengal	41	36	45	34	22	8
	Jan.	Feb.	Mar.	Apl.	May	June
Arabian Sea	..	..	..	2	15	
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Arabian Sea	2	..	1	1	5	..

The preceding paragraphs give an account of the normal procession of the seasons throughout India during the year, but it must be remembered, that every year produces **variations from the normal**, and that in some years these variations are very large. This is more particularly the case with the discontinuous element rainfall. The most important variations in this element which may occur are:—

(1) Delay in the commencement of the rains over a large part of the country, this being most frequent in North Bombay and North-west India.

(2) A prolonged break in July or August or both.

(3) Early termination of the rains, which may occur in any part of the country

(4) The determination throughout the monsoon period of more rain than usual to one part and less than usual to another part of the country. Examples of this occur every year.

About the middle of September fine and fresh weather begins to appear in the extreme north-west of India. This area of fine weather and dry winds extends eastward and southward, the area of rainy weather at the same time contracting till by the end of October the rainy area has retreated to Madras and the south of the Peninsula and by the end of December has disappeared from the Indian region, fine clear weather prevailing throughout. This procession with the numerous variations and modifications which are inseparable from meteorological conditions repeats itself year after year.

(*For monsoon of* 1921, *see page* 331).

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
HILL STATIONS.		°	°	°	°	°	°	°	°	°	°	°	°	°
*Shillong	4,920	49.5	51.8	60.4	65.2	66.6	68.8	70.0	69.2	68.4	63.1	56.5	50.7	61.7
Darjeeling	7,376	40.1	41.6	49.7	56.2	58.3	59.9	61.5	60.9	59.4	55.2	47.8	41.8	52.7
Simla	7,224	38.8	40.6	51.5	59.3	66.0	66.9	64.3	62.8	60.9	56.7	50.1	43.4	55.1
Murree	6,333	40.5	41.1	51.1	61.2	68.3	72.3	69.4	67.2	65.9	61.3	52.8	45.0	58.0
Srinagar	5,204	30.7	33.0	45.1	55.7	63.9	69.9	73.0	70.8	64.0	53.2	44.0	36.3	53.3
Mount Abu	3,945	58.2	61.0	69.9	78.0	79.8	74.9	69.8	67.6	69.6	71.6	65.2	59.9	68.8
*Ootacamund	7,327	54.0	55.5	58.6	61.5	61.3	58.2	56.9	57.4	57.3	57.2	55.4	54.3	57.3
*Kodaikanal	7,688	55.0	56.7	59.6	61.5	61.2	59.4	57.6	57.8	57.6	56.9	54.9	55.0	57.8
COAST STATIONS.														
Karachi	49	65.3	68.4	75.0	80.6	84.7	86.8	84.3	82.4	82.0	80.0	74.0	67.4	77.6
Veraval	18	69.4	70.2	74.0	79.1	81.5	82.5	80.0	79.1	79.0	79.5	77.2	72.3	77.0
Bombay	37	74.5	74.8	78.0	82.1	84.6	82.4	79.5	79.4	79.4	80.7	79.3	76.4	79.3
Ratnagiri	110	76.2	76.0	78.5	82.8	84.3	80.7	78.3	78.4	78.2	79.8	79.5	77.6	79.2
Mangalore	65	78.2	79.3	81.1	83.9	83.5	78.8	77.1	77.3	77.6	78.9	79.8	79.0	79.6
Calicut	27	77.8	79.8	81.6	83.6	83.1	78.5	76.7	77.4	78.3	79.1	79.5	78.3	75.9
Negapatam	31	75.5	77.4	80.5	84.8	87.7	87.0	85.6	84.4	83.4	80.9	78.3	76.0	81.8
Madras	22	75.3	76.6	79.5	84.1	88.7	88.4	85.7	84.5	83.9	80.8	77.9	75.7	81.8
Masulipatam	15	73.6	76.7	80.3	85.2	89.8	87.8	83.9	83.4	83.0	81.2	77 4	74.0	81.4
Gopalpur	21	70.0	74.8	78.3	81.6	84.1	83.7	81.8	82.0	82.2	79.6	74 3	69.8	78.6
Rangoon	57	74.7	77.3	81.2	85.0	82.2	79.5	78.8	78.7	79.1	80.0	78 3	75.6	79.2

* As the average mean figures for Shillong, Ootacamund and Kodaikanal are not available, means of normal maximum and minimum temperatures uncorrected for diurnal variation are given.

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
STATIONS ON THE PLAINS.		°	°	°	°	°	°	°	°	°	°	°	°	°
Toungoo	183	70.0	74.7	81.9	86.7	85.3	81.3	80.1	80.1	81.3	81.4	77.4	71.6	79.3
Mandalay	250	68.8	73.8	82.1	89.2	88.5	85.4	85.2	84.7	83.5	82.5	75.9	69.5	80.8
Silchar	104	63.8	67.0	73.9	78.0	80.1	81.4	82.6	82.4	81.7	79.7	73.1	66.1	75.9
Calcutta	21	65.2	70.3	79.3	85.0	85.7	84.5	83.0	82.4	82.6	80.0	72.4	65.3	77.9
Burdwan	99	65.7	70.0	80.4	86.7	86.5	84.9	83.6	82.8	83.1	80.7	73.0	66.3	78.6
Patna	183	60.8	65.3	76.9	86.2	88.0	86.4	83.5	83.1	83.3	79.5	70.1	62.2	77.1
Benares	267	60.0	65.3	76.6	86.8	91.3	89.4	84.1	83.1	83.0	77.9	67.8	60.2	77.2
Allahabad	309	59.5	64.9	76.8	87.6	92.5	90.8	84.5	83.2	83.0	77.6	67.5	59.8	77.3
Lucknow	368	58.7	63.7	75.2	86.4	90.6	90.2	85.3	83.4	83.2	77.1	66.3	58.9	76.6
Agra	555	60.1	64.8	76.7	88.1	94.0	93.4	86.0	84.2	84.2	79.4	68.7	61.2	78.4
Meerut	738	56.0	60.1	71.1	82.7	88.4	89.4	85.0	83.2	81.7	74.7	63.5	56.7	74.4
Delhi	718	57.9	62.2	74.1	86.2	91.7	92.2	86.4	84.5	83.9	78.5	67.6	59.6	77.1
Lahore	702	53.0	57.3	69.0	80.9	88.9	93.0	89.1	87.1	84.8	75.7	63.2	54.6	74.7
Multan	420	55.6	59.8	71.6	82.9	91.4	94.9	92.7	90.4	88.0	78.6	67.1	57.7	77.5
Jacobabad	186	57.3	62.4	74.5	85.5	94.2	97.7	95.0	91.6	88.8	79.2	67.5	58.9	79.3
Hyderabad (Sind)	96	63.6	67.1	77.6	86.2	91.6	91.7	88.6	86.0	86.0	82.7	73.4	65.0	79.9
Bikaner	771	59.2	63.6	76.6	88.4	94.1	94.7	90.4	87.3	87.4	82.4	70.5	61.4	79.6
Rajkote	429	66.8	70.0	77.4	85.1	89.2	87.5	81.7	80.6	80.8	80.4	74.1	68.4	78.5
Ahmedabad	163	70.3	74.0	82.7	91.2	92.9	89.4	83.7	83.0	83.5	84.3	78.3	72.9	82.1
PLATEAU STATIONS.														
Akola	930	68.5	73.7	81.9	90.1	93.3	86.2	80.6	78.9	79.7	77.9	71.7	66.8	79.2
Jubbulpore	1,327	61.8	66.8	76.5	86.3	91.9	85.7	79.0	78.0	79.0	74.8	66.6	60.3	75.6
Nagpore	1,025	68.8	74.3	82.4	90.6	94.5	86.6	80.4	79.4	80.4	78.4	72.2	67.1	79.6
Raipur	970	67.7	73.6	81.9	90.3	93.6	86.0	79.6	79.0	80.3	78.1	71.5	66.0	79 0
Ahmednagar	2,152	67.1	71.3	77.5	82.5	83.8	79.2	76.2	74.9	74.5	75.1	70.5	67.1	75.0
Poona	1,840	69.8	73.9	80.1	83.9	83.8	78.7	74.9	73.7	74.4	76.2	72.5	68.9	75.9
Sholapur	1,590	72.7	77.7	84.2	88.4	88.9	81.8	78.9	77.7	77.3	77.7	74.6	71.3	79.3
Belgaum	2,539	69.8	73.0	77.5	79.2	78.0	72.8	70.1	69.7	70.4	72.9	70.9	69 3	72.8
Hyderabad (Deccan)	1,690	70.4	77.1	83.1	88.0	90.1	82.6	77.9	77.1	77.4	76.8	72.3	69.1	78.5
Bangalore	3,021	67.5	72.0	76.7	79.9	78.5	74.0	72.0	71.8	71.8	71.8	69.6	67.5	72.8
Bellary	1,475	73.2	79.6	85.6	89.2	89.0	83.4	80.9	80.6	80.2	79.1	75.3	72.5	80.8

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total.
HILL STATIONS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Shillong	4,920	0.49	0.81	1.85	4.29	10.06	16.46	13.48	12.79	14.75	6.23	0.98	0.25	82.44
Darjeeling	7,376	0.76	1.08	2.01	4.08	7.83	24.19	31.74	25.98	18.34	5.35	0.24	0.20	121.80
Simla	7,224	3.21	3.07	2.48	2.32	3.71	7.84	18.42	17.87	6.17	1.19	0.41	1.28	67.97
Murree	6,333	3.73	4.14	3.96	3.62	2.99	3.41	12.51	13.40	5.64	1.86	1.27	1.37	57.90
Srinagar	5,204	3.36	4.24	3.10	3.30	2.72	1.77	2.78	1.95	1.18	1.14	0.41	1.08	27.03
Mount Abu	3,945	0.27	0.31	0.15	0.08	0.97	5.59	22.05	21.51	9.58	1.46	0.28	0.24	62.49
Ootacamund	7,327	0.35	0.38	1.00	3.46	5.93	6.18	5.94	4.70	4.44	8.57	4.00	1.65	46.60
Kodaikanal	7,688	1.17	1.48	3.59	5.29	6.47	4.01	3.89	5.99	6.70	12.49	8.17	5.57	64.82
COAST STATIONS.														
Karachi	49	0.64	0.30	0.15	0.13	0.03	0.43	3.16	1.77	0.66	0.04	0.16	0.19	7.66
Veraval	18	0.01	0.03	0.00	0.00	0.02	5.31	8.92	7.27	2.40	0.81	0.66	0.10	25.53
Bombay	37	0.12	0.02	0.01	0.05	0.55	20.56	24.56	14.91	10.93	1.76	0.47	0.05	73.99
Ratnagiri	110	0.60	0.02	0.05	0.15	1.27	31.32	34.25	20.19	12.53	3.62	0.65	0.06	104.71
Mangalore	65	0.13	0.07	0.11	2.06	7.26	38.47	37.39	22.88	11.09	7.90	1.97	0.50	129.83
Calicut	27	0.17	0.16	0.79	3.70	9.04	36.46	29.36	14.89	7.39	9.12	3.80	1.32	116.20
Negapatam	31	1.15	0.72	0.32	1.02	1.81	1.30	1.74	3.29	3.55	10.08	15.02	11.23	51.23
Madras	22	0.83	0.28	0.37	0.65	1.96	2.06	3.80	4.66	4.84	10.93	13.30	5.25	48.93
Masulipatam	15	0.17	0.16	0.26	0.40	1.34	4.33	5.67	6.09	6.56	8.36	4.43	0.53	38.30
Gopalpur	21	0.23	0.43	0.56	0.73	2.01	5.76	6.11	7.20	6.86	9.84	3.50	0.72	43.95
Rangoon	57	0.11	0.23	0.16	1.74	11.73	18.30	21.37	19.65	15.89	7.12	2.52	0.07	98.89

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total.
STATIONS ON THE PLAINS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Toungoo	183	0.06	0.12	0.08	1.90	6.43	13.63	17.48	18.53	11.46	6.95	1.25	0.16	78.05
Mandalay	250	0.06	0.08	0 21	1.19	5.26	5.71	3.26	4.16	6.21	4.54	1.67	0.28	32.63
Silchar	104	0.64	2.32	7.93	13.56	15.72	20.39	19.98	18.69	13.95	6.40	1.31	0.54	121.43
Calcutta	21	0.29	1.02	1.14	1.54	5.60	11.04	12.31	12.69	10.40	3.87	0.62	0.31	60.83
Burdwan	99	0.38	0.89	1.24	2.20	5.56	10.17	12.32	11.49	8.59	3.93	0.64	0.13	57.54
Patna	183	0.72	0.53	0.35	0.30	1.70	7.76	11.41	10.72	7.82	2.89	0.20	0.14	44:54
Benares	267	0.74	0.51	0.33	0.15	0.56	5.45	12.54	11.13	6.54	2.24	0.17	0.17	40.59
Allahabad	309	0.82	0.48	0.38	0.14	0.29	5.09	12.24	10.88	6.32	2.40	0.25	0.23	39.52
Lucknow	268	0.90	0.45	0.32	0.11	0.91	5.34	11.39	11.32	6.61	1.33	0.08	0.44	39.20
Agra	555	0.55	0.33	0.25	0.16	0.64	2.84	9.67	7.11	4.41	0.39	0.06	0.29	26.70
Meerut	788	1.05	0.83	0.63	0.34	0.70	3.60	9.37	7.64	4.55	0.43	0.08	0.40	29.62
Delhi	718	1.02	0.61	0.67	0.35	0.71	3.18	8.38	7.44	4.42	0.39	0.10	0.43	27.70
Lahore	702	0.87	1.13	0.89	0.51	0.80	1.86	6.65	4.88	2.10	0.43	0.11	0.47	20.70
Multan	420	0.39	0.36	0.42	0.27	0.39	0.43	2.19	1.66	0.60	0.07	0.06	0.27	7.11
Jacobabad	186	0.28	0.27	0.25	0.17	0.15	0.10	1.18	1.25	0.19	0.01	0.10	0.15	4.10
Hyderabad (Sind)	96	0.24	0.22	0.10	0.07	0.11	0.41	2.61	2.77	0.54	0.00	0.10	0.05	7.22
Bikaner	771	0.38	0.24	0.18	0.14	0.84	1.65	3.29	3.14	1.68	0.09	0.06	0.18	11.27
Rajkote	429	0.05	0.10	0.01	0.01	0.31	5.21	10.89	6.41	3.75	0.67	0.33	0.06	27.80
Ahmedabad	163	0.02	0.10	0.01	0.03	0.46	3.94	11.49	8.26	4.42	0.55	0.19	0.05	29.52
PLATEAU STATIONS.														
Akola	930	0.45	0.18	0.43	0.16	0.31	5.12	8.74	6.48	6.24	2.14	0.44	0.58	31.2
Jubbulpore	1,527	0.72	0.52	0.48	0.22	0.47	8.53	18.82	15.13	8.58	1.55	0.37	0.26	55.45
Nagpore	1,025	0.58	0.42	0.57	0.46	0.68	8.44	13.49	9.79	8.11	2.14	0.51	0.45	45.62
Raipur	970	0.30	0.33	0.59	0.59	0.76	9.38	14.94	12.72	7.75	2.09	0.62	0.20	50.27
Ahmednagar	2,152	0.27	0.12	0.15	0.40	1.16	4.73	3.03	3.60	6.75	3.12	0.89	0.44	24.66
Poona	1,840	0.18	0.05	0.13	0.58	1.45	5.35	6.90	4.03	4.43	4.11	0.85	0.20	28.26
Sholapur	1,590	0.06	0.08	0.29	0.63	1.09	4.41	4.19	5.42	7.77	3.63	0.87	0.30	28.74
Belgaum	2,539	0.06	0.03	0.49	2.05	2.73	9.32	15.37	9.15	4.05	5.09	1.33	0.24	49.91
Hyderabad (Deccan)	1,690	0.05	0.12	0.67	0.73	0.78	4.44	6.22	6.76	7.10	2.98	1.53	0.17	31.55
Bangalore	3,021	0.06	0 22	0.72	1.19	4.53	3.13	4.13	6.00	7.11	6.74	2.61	0.59	36.83
Bellary	1,475	0.10	0.03	0.42	0.83	1.93	1.84	1.41	2.18	4.12	4.04	1.20	0.20	18.30

MONSOON OF 1921.

The Arabian Sea Monsoon broke on the Malabar coast on the 2nd, about the usual date, and in the interior of the Peninsula on the 3rd. After a slight delay it reached Bombay and the central parts of the country on the 9th and extended into Gujerat on the 10th. The Bay monsoon reached Bengal as early as the 26th May, nearly a fortnight before the normal date, and extended into Bihar and Orissa on the 8th June and into the United Provinces on the 12th Both the currents were active between the 18th and 23rd, giving widespread rain in the United and the Central Provinces. But on the 25th a break set in over the whole field of the Arabian Sea current and lasted till the 4th July. During the next two days the monsoon strengthened in the Peninsula and within a week it had extended into the United Provinces and the Punjab Till then the rainfall in north-west India had been very scanty, Gujarat and Rajputana having received less than a seventh of their normal amount. Fortunately a vigorous monsoon prevailed during the next four weeks over the greater part of the country. In the last week of July its activity was aided by a storm, which travelled from the head of the Bay to Baluchistan, causing widespread and locally heavy rain along its track Another partial break set in about the middle of August in the north of the Peninsula and the greater part of north-west India, this lasted with occasional interruptions, until the end of the month in north-west India and until the middle of September in the Deccan. Over the rest of the country the monsoon continued fairly active throughout August. In September three depressions moving eastwards over northern India concentrated the rainfall to an unusual extent in the United Provinces, Gujrat, Rajputana East and the Central parts of the country. The monsoon withdrew from north-west India on the 23rd, a week after its usual date.

The rainfall of the period over the plains of India as a whole was nearly normal, being in excess by only 0·8″ or 2 per cent. The distribution was somewhat unequal a slight deficiency occurring over the greater part of the Peninsula, and an excess in the United Provinces and most of north-west India Sind received double its usual amount and the excess amounted to about 10 per cent in Baluchistan and the south-west Punjab and about 20 per cent in the United Provinces, the North-West Frontier Province, Gujerat and south-east Madras. Mysore and the Madras Deccan fared worst with deficiencies approximating to 25 per cent, while the totals for the Bombay, Deccan and Hyderabad were about 13 per cent. in defect.

The following table gives detailed information of the rainfall of the period :—

DIVISION.	RAINFALL, JUNE TO SEPTEMBER 1921.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal
	Inches.	Inches.	Inches	
Burma	86.1	84 0	+ 2 1	+ 3
Assam	65.1	60 6	+ 4.5	+ 7
Bengal	60 4	59.5	+ 0 9	+ 2
Bihar and Orissa	45 3	45 2	+ 0 1	0
United Provinces	42 6	36.2	+ 6.4	+ 18
Punjab	15 5	15 5	0	0
North-West Frontier Province	6.0	4 9	+ 1 1	+ 22
Sind	9.9	4.8	+ 5 1	+106
Rajputana	16 5	17 4	— 0 9	— 5
Bombay	39 0	38 4	+ 0 6	+ 2
Central India	33 2	33 3	— 0.1	0
Central Provinces	41.0	40.8	+ 0.2	0
Hyderabad	23.7	26.8	— 3.1	— 12
Mysore	11.2	15.5	— 4.3	— 28
Madras	26.8	26.5	+ 0.3	+ 1
Mean of India	40.5	39.7	+ 0.8	+ 2

The Textile Industry.

India has been the home of the cotton trade from the earliest times. Its cotton, known as white wool, was well known to the ancients and its cloth was familiar to the West in the days of the overland route. The name Calico comes from the fine woven goods of Calicut, and the products of the Dacca handlooms are still remarkable as the finest muslins human skill can produce.

Indian Cotton.

The exports of Indian cotton began to assume importance with the opening of the sea route. They received an immense stimulus during the American Civil War, when the close blockade of the Confederate ports produced a cotton famine in Lancashire, and threw the English spinners back on India for their supply of raw material. When the war broke out the shipments of Indian cotton were 528,000 bales, but during the last year of the war they averaged 973,000 bales. Most of this cotton was sold at an enormously inflated price, and induced a flow of wealth into Bombay, the great centre of the trade, for which there was no outlet. The consequence was an unprecedented outburst of speculation known as the "Share Mania," and when the surrender of Lee re-opened the Southern Ports widespread ruin followed. It is estimated that the surplus wealth brought into the country by the American Civil War aggregated £ 92 millions. Since then the cultivation of Indian cotton, although interrupted by famine, has steadily increased. For the last season for which returns are available 1919-20 the total area in all the territories reported on was computed at 23,063,000 acres which is 2,025,000 acres or nearly 10 per cent. over the revised figures of last year. The total estimated outturn was 5,845,000 bales of 400 lbs. which is 47 per cent. larger than the revised estimates of last year. To this figure may be added some 1,000 bales estimated as the production in Native States in Bihar and Orissa which make no return.

Bombay, the Central Provinces and Hyderabad are the chief producing centres. The following table gives the rough distribution of the outturn. The figures are the estimated figures for the past season, and are not exact, but they indicate the distribution of the crop :—

Provinces and States.	1920-21 (Provisional estimates.) Area (acres).	Yield (bales.)
Bombay (including Indian States)	5,308,000	876,000
Central Provinces and Berar	4,478,000	511,000
Madras (including Indian States)	2,223,000	356,000
Punjab (including Indian States)	2,116,000	581,000
United Provinces (including Indian States)	1,161,000	336,000
Sind (including Indian States)	279,000	42,000
Burma	376,000	63,000
Bengal (including Hill Tipperah)	70,000	21,000
Bihar and Orissa (*a*)	76,000	15,000
North-West Frontier Province	27,000	5,000
Assam	34,000	12,000
Ajmer-Merwara	42,000	15,000
Hyderabad	2,214,000	341,000
Central India	1,388,000	163,000
Baroda	792,000	127,000
Rajputana	371,000	81,000
Mysore	111,000	11,000
Total	21,016,000	3,556,000

The distribution of the export trade is indicated in the appended table.

Exports of Cotton.—A portion of the Indian crops of the season 1919-20 and a portion of the crop of the season 1920-21 came into statistical consideration in the exports during the year 1920-21. The exports amounted to 7½ million cwts. valued at Rs. 41½ crores, against 8½ million cwts. valued at Rs. 58½ crores in 1919-20. This represents 40.24 per cent. of the total value of raw materials exported from India and 17·46 per cent. of the total exports. The exports showed a decrease of 13·48 per cent. in quantity and 29·02 per cent. in value. The average declared value per unit fell from Rs. 68 to 56 or by 17·64 per cent. whereas the total decrease was Rs. 17 crores. The United Kingdom and Japan had larger receipts during the war period as compared with those in the earlier period. The principal purchasers of cotton other than Japan are in normal years Germany, Belgium, Italy, Austria-Hungary and France.

—	Exports of Raw Cotton. 1918-19. Cwts.	1919-20. Cwts.	1920-21. Cwts.
United Kingdom	276,160	532,280	342,880
Germany	..	173,600	719,180
Holland	..	54,000	42,200
Belgium	..	490,840	807,560
France	36,440	204,260	137,340
Spain	2,460	154,660	273,500
Italy	440,780	554,260	760,320
Austria-Hungary	..	31,460	121,960
Ceylon	11,620	10,040	13,700
Indo-China	36,240	12,920	32,400
China	54,040	322,240	684,940
Japan	2,797,500	5,918,980	3,353,620
United States of America	8,560	63,380	33,500
Other Countries	15,200	43,680	28,600
Total { cwt.	3,679,000	8,566,600	7,411,700
Total { =lbs. †	1,030,120	2,398,649	2,073,856

(*a*) Excluding Indian States for which the yield is roughly estimated at 1,000 bales.
† Bales of 400 lbs. each.

Bombay is the great centre of the cotton trade. The **principal varieties** are Dholleras, Broach, Oomras (from the Berars), Dharwar and Coomptas. Broach is the best cotton grown in Western India. Hinganghat cotton, from the Central Provinces, has a good reputation. Bengals is the name given to the cotton of the Gangetic valley, and generally to the cottons of Northern India. The Madras cottons are known as Westerns, Coconadas, Coimbatores and Tinnevellys. The best of these is Tinnevelly. Cambodia cotton has been grown with success in Southern India, but it shows a tendency to revert. The high prices of cotton realised of recent years have given a great impetus to cultivation. Government have also been active in improving the class of cotton produced, by seed selection, hybridization and the importation of exotic cottons. Although these measures have met with a considerable measure of success, they have not proceeded far enough to leaven the whole outturn, which still consists for the most part of a short-staple early maturing variety, suitable to soils where the rainy season is brief.

Reference has been made to the popularity of the Indian handloom cloths in the earliest days of which we have record. This trade grew so large that it excited alarm in England; and it was killed by a series of enactments; commencing in 1701, prohibiting the use or sale of Indian calicoes in England. The invention of the spinning jenny and the power loom and their development in England converted India from an exporting into an importing country, and made her dependent on the United Kingdom for the bulk of her piece-goods. The first attempt to establish a cotton mill in India was in 1838, but the foundations of the industry were really laid by the opening of the first mill in Bombay in 1856. Thereafter, with occasional set backs from famine, plague and other causes, its progress was rapid.

The following statement shows the quantity (in pounds) of yarn of all counts spun in all India for the twelve months, April to March, in each of the past three years: —

	1918-19.	1919-20.	1920-21.
BRITISH INDIA.			
Bombay	427,638,345	439,799,625	469,944,9
Madras	42,787,344	44,346,268	41,240,677
Bengal	32,507,148	35,229,179	33,329,116
United Provinces	34,390,651	35,181,284	37,060,104
Ajmer-Merwara	2,056,501	1,964,851	2,030,944
Punjab	3,919,719	3,359,107	2,780,078
Delhi	2,981,057	3,286,534	3,936,997
Central Provinces and Berar	34,279,946	34,188,442	31,269,565
TOTAL ..	580,560,714	597,355,290	621,655,441
FOREIGN TERRITORY.			
Indian States of Indore, Mysore, Baroda, Nandgaon, Bhavnagar, Hyderabad, Wadhwan, Gwalior (Ujjain) and Pondicherry (*a*)..	34,479,750	38,404,983	38,347,156
GRAND TOTAL ..	615,040,464	635,760,273	660,002,597

(*a*) Including the production of one mill only.

The spinning of yarn is in a large degree centred in Bombay, the mills of that province producing nearly 75 per cent. of the quantity produced in British India. The United Provinces of Agra and Oudh and Madras produced about 5 per cent. and 7 per cent. respectively, while Bengal and the Central Provinces produced 5 and 5 per cent. Elsewhere the production is as yet very limited.

Bombay Spinners.

Here is a detailed statement of the quantity (in pounds) and the counts, or numbers, of yarn spun in Bombay island :—

	1918-19.	1919-20.	1920-21.
Nos. 1—10	55,970,012	56,406,494	58,241,600
„ 11—20	151,433,239	173,434,860	183,838,880
„ 21—30	90,604,192	81,273,924	94,133,739
„ 31—40	6,669,429	5,160,689	5,178,343
Above 40	1,446,515	1,405,414	921,139
Wastes, &c.	66,661	37,654	142,707
Total ..	306,190,048	317,719,041	342,456,408

Yarn at Ahmedabad.

The corresponding figures for Ahmedabad are as follows :—

	1918-19.	1919-20.	1920-21.
Nos. 1—10	1,481,934	1,594,348	1,806,517
„ 11—20	19,362,183	19,625,333	23,615,339
„ 21—30	43,318,133	44,969,255	44,616,889
„ 31—40	8,288,765	6,819,745	6,068,457
Above 40	772,643	534,978	194,315
Wastes, &c.	....	....	3,000
Total ..	73,223,658	73,543,659	76,304,517

Yarn Spun throughout India.

The grand totals of the quantities in various counts of yarn spun in the whole of India, including Native States, are given in the following table :—

	1918-19.	1919-20.	1920-21.
Nos. 1—10	87,319,699	84,187,677	83 943,074
„ 11—20	314,540,680	346,999,987	359 527,326
„ 21—30	189,204,470	183,656,912	199 085 748
„ 31—40	19,189,215	17,080,435	15,024,389
Above 40	4,555,242	3,559,967	2,067,168
Wastes; &c.	231,158	275,295	354 892
Total ..	615,040,464	635,760,273	660,002,597

In the early days of the textile industry the energies of the millowners were largely concentrated on the production of yarn, both for the China market, and for the handlooms of India. The increasing competition of Japan in the China market, the growth of an indigenous industry in China and the uncertainties introduced by the fluctuations in the China exchanges consequent on variations in the price of silver compelled the millowners to cultivate the Home market. The general tendency of recent years has been to spin higher counts of yarn, importing American cotton for this purpose to supplement the Indian supply, to erect more looms, and to produce more dyed and bleached goods. This practice has reached a higher development in Bombay than in other parts of India, and the Bombay Presidency produces nearly 87 per cent. of the cloth woven in India. The United Provinces produces 2·4 per cent., the Central Provinces 3·8 per cent. and Madras about 2·5 per cent. Grey and Bleached goods represent nearly 70 per cent. of the whole production.

Analysis of Woven Goods.

The following brief extract is taken from the statement of the quantity (in pounds and their equivalent in yards) and description of woven goods produced in all India, including Native States :—

	1918–19.	1919–20.	1920–21.
Grey and Bleached piece-goods—			
Pounds	257,839,998	276,632,412	263,564,482
Yards	1,076,711,011	1,164,073,101	1,129,882,568
Coloured piece-goods—			
Pounds	85,601,778	102,146,317	98,387,636
Yards	374,015,149	475,706,126	450,967,178
Grey and coloured goods other than piece-goods—			
Pounds	3,743,704	3,320,418	3,484,852
Dozens	721,172	658,768	707,449
Hosiery—			
Pounds	260,968	293,738	410,784
Dozens	148,696	159,357	117,249
Miscellaneous—			
Pounds	1,826,837	1,250,221	1,407,503
Cotton goods mixed with silk or wool—			
Pounds	307,165	203,830	226,529
Total—			
Pounds	349,580,450	383,846,936	367,481,791
Yards	1,450,726,160	1,639,779,227	1,580,849,746
Dozens	869,868	818,125	824,698

Bombay Woven Goods.

The output of woven goods during the three years in the Bombay Presidency was as follows. The weight (in pounds represents the weight of all woven goods ; the measure in yards represents the equivalent of the weight of the grey and coloured piece-goods.)

	1918–19.	1919–20.	1920–21.
Pounds	275,801,034	306,248,898	292,370,172
Yards	1,197,421,958	1,352,606,307	1,304,806,802
Dozens	746,471	634,476	632,757

The grand totals for all India are as follows :—

	1918–19.	1919–20.	1920–21.
Pounds	349,580,450	383,846,936	367,481,791
Yards	1,450,726,160	1,639,779,227	1,580,849,746
Dozens	869,868	818,125	824,698

Progress of the Mill Industry.

The following statement shows the progress of the Mill Industry in the whole of India.

Years ending 30th June	Number of Mills.	Number of Spindles.	Number of Looms.	Average No of Hands Employed Daily.	Approximate Quantity of Cotton Consumed.	
					Cwts.	Bales of 392 lbs.
1877	51	12,44,206	10,385	Not	stated.	Not stated.
1878	53	12,89,706	10,533	D	o.	Do.
1879	56	14,52,794	13,018	42,914	9,36,547	2,67,585
1880	56	14,61,590	13,502	44,410	10,76,708	3,07,631
1881	57	15,13,096	13,707	46,430	13,26,461	3,78,989
1882	65	16,20,814	14,172	48,467	13,91,467	3,97,562
1883	67	17,90,388	15,373	53,476	15,97,946	4,56,556
1884	79	20,01,667	16,262	60,387	18,59,777	5,31,365
1885	87	21,45,646	16,537	67,186	20,88,621	5,96,749
1886	95	22,61,561	17,455	74,383	22,51,214	6,43,204
1887	103	24,21,290	18,536	76,942	25,41,966	7,26,276
1888	114	24,88,851	19,496	82,379	27,54,437	7,86,982
1889	124	27,62,518	21,561	91,598	31,10,289	8,88,654
1890	137	32,74,196	23,412	1,02,721	35,29,617	10,08,462
1891	134	33,51,694	24,531	1,11,018	41,26,171	11,78,906
1892	139	34,02,232	25,444	1,16,161	40,80,783	11,65,938
1893	141	35,75,917	28,164	1,21,500	40,98,528	11,71,008
1894	142	36,49,736	31,154	1,30,461	42,78,778	12,22,508
1895	148	38,09,929	35,338	1,38,669	46,95,999	13,41,714
1896	155	39,32,946	37,270	1,45,432	49,32,613	14,09,318
1897	173	40,65,618	37,584	1,44,335	45,53,276	13,00,936
1898	185	42,59,720	38,013	1,48,964	51,84,648	14,81,328
1899	188	47,28,933	39,069	1,62,108	58,63,165	16,75,190
1900	193	49,45,783	40,124	1,61,189	50,86,732	14,52,352
1901	193	50,08,936	41,180	1,72,883	47,31,090	13,51,740
1902	192	50,06,965	42,584	1,81,031	61,77,633	17,65,038
1903	192	50,43,297	44,092	1,81,399	60,87,690	17,39,340
1904	191	51,18,121	45,337	1,84,779	61,06,631	17,44,766
1905	197	51,63,486	50,139	1,95,277	65,77,354	18,79,244
1906	217	52,79,595	52,668	2,08,616	70,82,306	20,23,516
1907	224	53,33,275	58,436	2,05,696	69,30,595	19,80,170
1908	241	57,56,020	67,920	2,21,195	69,70,250	19,91,506
1909	259	60,53,231	76,898	2,36,924	73,81,500	21,09,000
1910	263	61,95,671	82,725	2,33,624	67,72,535	19,35,010
1911	263	63,57,460	85,352	2,30,649	66,70,531	19,05,866
1912	268	64,63,929	88,951	2,43,637	71,75,357	20,50,102
1913	272	65,96,862	94,136	2,53,786	73,36,056	20,96,016
1914*	271	67,78,895	1,04,179	2,60,276	75,00,941	21,43,126
1915*	272	68,48,744	1,08,009	2,65,346	73,59,212	21,02,632
1916*	266	68,39,877	1,10,268	2,74,361	76,92,013	21,97,718
1917*	263	67,38,697	1,14,621	2,76,771	76,93,574	21,98,164
1918*	262	66,53,871	1,16,484	2,82,227	72,99,573	20,85,678
1919*	258	66,89,680	1,18,221	2,93,277	71,54,805	20,44,230
1920	253	67,63,076	1,19,0 2	3,11,078	68,33,113	19,52,318

* Year ending 31st August.

Earnings of Labour.

In 1917 wages in the Bombay cotton industry were increased by ten per cent. to meet the higher cost of food. They were raised a further ten per cent. in 1919. We give the average wages, it being understood that the Bombay rate is at least ten per cent. higher.

AVERAGE WAGES.

Cotton.	Rate per	1915.	1916.	1917.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Card Room	Month	12 13 0	12 13 7	13 2 9
Ring-throstle Room	,,	12 6 8	12 6 8	12 12 0
Reeling Room	,,	9 8 0	9 8 0	10 8 0
Bundling Room	,,	16 0 0	16 0 0	17 0 0
Sizing Department	,,	23 6 10	23 6 10	23 6 10
Weaving Department	,,	33 8 0	36 0 0	36 0 0

Statement of the amount in rupees of Excise duty realised from goods woven in the Cotton Mills in British India; under the Cotton Duties Act, II of 1896; also the amount of equivalent duty levied in the Native States; in each year from 1899-1900 to 1919-20.

	Bombay.	Madras.	Bengal.	United Provinces and Ajmer-Merwara.	Punjab and Delhi.	Central Provinces and Berar.
1900-01	10,28,542	41,827	5,038	50,116	5,806	84,978
1901-02	15,26,103	54,139	5,863	69,284	4,379	1,10,140
1902-03	15,84,121	67,813	6,605	74,023	3,031	1,50,620
1903-04	17,64,527	62,350	10,908	89,189	1,104	1,56,371
1904-05	20,43,832	65,379	11,929	96,710	2,607	1,61,368
1905-06	22,78,425	1,10,943	11,165	1,32,364	5,144	1,68,743
1906-07	24,36,265	1,22,603	23,709	1,35,884	7,464	1,64,680
1907-08	28,82,296	1,25,131	31,556	1,66,044	8,746	1,75,944
1908-09	29,51,859	1,49,295	53,351	1,88,345	9,509	1,98,419
1909-10	33,88,658	1,45,333	55,822	1,92,552	8,611	2,17,217
1910-11	36,78,553	1,48,136	56,359	1,82,083	7,300	2,07,818
1911-12	42,17,878	1,65,048	48,631	1,84,653	10,862	2,52,415
1912-13	48,27,698	2,06,862	81,709	2,11,847	17,971	2,71,882
1913-14	45,68,188	2,13,166	78,951	2,55,467	22,353	3,00,919
1914-15	42,31,546	1,83,880	53,046	2,07,454	10,068	2,54,927
1915-16	42,25,608	2,11,456	41,704	2,01,012	9,291	2,36,497
1916-17	35,38,236	2,87,043	70,529	2,47,991	24,183	2,93,466
1917-18	64,13,806	7,09,467	1,18,336	2,91,052	38,628	3,49,490
1918-19	1,16,18,396	7,48,545	2,10,582	5 07,555	56,612	6,75,343
1919-20	1,28,66,707	7,67,021	3,32,972	6,12,726	68,383	8,66,681
1920-21	2 07,45,555	7,50,691	3,18,018	6,97,185	73,847	9,52,530

	Total British India.		Native States.	Grand Total.	
	Gross duty.	Net duty.	Gross duty.	Gross duty	Net duty.
1900-01	12,16,367	11,62,947	48,449	12,64,756	12,11,396
1901-02	17,69,908	17,16,836	61,171	18,31,079	17,77,965
1902-03	18,66,213	18,25,469	65,541	19,31,754	18,91,010
1903-04	20,77,449	20,36,104	59,061	21,36,510	20,95,149
1904-05	23,81,825	23,33,636	67,320	24,49,145	24,06,976
1905-06	27,06,784	26,71,061	83,455	27,90,239	27,54,516
1906-07	29,00,957	28,64,202	81,976	29,82,671	29,46,152
1907-08	33,99,717	33,55,946	97,499	34,97,216	34,53,443
1908-09	35,43,778	34,98,480	1,14,498	36,58,276	36,12,977
1909-10	40,06,193	39,61,020	1,37,699	41,43,892	40,98,719
1910-11	42,26,575	1,75,878	1,75,878	44,56,129	44,01,707
1911-12	48,79,478	48,04,492	1,82,479	50,61,957	49,86,971
1912-13	56,17,969	55,76,567	2,21,178	58,39,147	57,97,745
1913-14	54,39,043	53,95,014	2,38,393	56,77,436	56,33,407
1914-15	49,40,931	49,32,185	2,33,160	51,74,091	51,65,345
1915-16	49,25,571	48,40,107	1,90,275	51,15,846	50,30,382
1916-17	44,61,448	43,80,425	2,47,301	47,08,749	46,27,726
1917-18	76,20,779	75,45,252	3,84,780	80,05,559	79.37,032
1918-19	1,38,17,033	1,36,79,252	5,07,891	1,43,24,924	1,41,87,143
1919-20	1,55,14,490	1,52.54,671	8,90.773	1 64,05 268	1,61,45 449
1920-21	2,35,37,826	2,30,70,694	9,65,902	2,45,03,728	2,40,36,596

The Jute Industry.

Considering its present dimensions, the jute industry of Bengal is of very recent origin. The first jute mill in Bengal was started at Rishra in 1855, and the first power-loom was introduced in 1859. The original outturn was 8 tons per day. In 1909 it had grown to 2,500 tons per day, it is now 3,000 tons per day, and it shows every indication of growing and expanding year by year. Another interesting thing about the jute industry of Bengal is that, although it is practically a monopoly of Scotsmen from Dundee, the industry itself owes its inception to an Englishman. The founder of the industry was George Acland, an Englishman, who began life as a midshipman in the navy, and was for some years in the East India Marine Service. He quitted this service while still a young man, and engaged in commercial pursuits in Ceylon, where he was successful. Later on he turned his attention to Bengal, and arriving in Calcutta about 1853 he got into touch with the management of the paper works, then at Serampore, where experiments were being tried with country grasses and fibre plants to improve the quality or cheapen the manufacture of paper. This seems to have suggested to Acland the manufacture of rhea, and in 1854 he proceeded to England, with a view to obtaining machinery and capital in order to manufacture goods from that material. During this trip he visited Dundee, and while there Mr. John Kerr, of Douglas Foundry, suggested to him the importing of machinery into Bengal "where the jute comes from and spin it there." This suggestion bore fruit, for shortly afterwards Acland placed orders with Kerr for a few systems of preparing and spinning machinery, and returned to India the same year accompanied by his two sons and a few Dundee mechanics who were to assist him in erecting and operating the first jute mill in Bengal. This, as has been stated, was at Rishra, the site of the present Wellington mills, near Serampore, and here, in 1855, the first machine spun jute yarns were made. As not infrequently happens the pioneer got very little out of his venture. After several ups and downs the Acland interest in the Rishra mill ceased in 1867, and the company which Acland had formed in 1854 was wound up in 1868.

Power-looms.—The pioneer's example was followed by Mr. George Henderson of that ilk and firm, and in 1859 the Borneo Jute Co. was launched under his auspices. To this company is due the credit of introducing the power-loom for jute cloth. Unhampered by the financial difficulties which had burdened the Aclands, the Borneo Jute Co. made rapid progress, doubling their works in 1864, and clearing their capital twice over. In 1872 the mills were turned into a limited liability company, the present "Barnagore Jute Manufacturing Co., Ld." Four other mills followed in succession—Gouripore, Serajgunge, and India Jute Mills.

"From 1866 to 1873," writes Mr. David Wallace in "The Romance of Jute," "the five mills excepting the Rishra mill simply coined money and brought the total of their looms up to 1,250." To illustrate the prosperity of the industry at this period we may take the dividends paid by the Barnagore Company. On the working of their first half year, a 15 per cent. interim dividend was declared, which seemed to justify the enormous capital at which the company was taken over from the Borneo Company, and shares touched 68 per cent. premium. The dividend for the first year, ending August 1873, was 25 per cent., for 1874, 20 per cent., and for 1875 10 per cent. Then came a change. The investing public had forgotten the effect of the Port Canning bubble, and the condition of the jute industry in 1872-73 seeming to offer a better return than coal or tea, both of which had just enjoyed a boom, it was only necessary to issue a prospectus of a jute mill to have all the shares snapped up in the course of an afternoon.

In 1872–73 three new companies were floated locally—the Fort Gloster, Budge Budge and Sibpore, and two Home companies, the Champdany and Samnugger, all of which commenced operations in 1874. In 1874–5 eight other mills were launched—the Howrah, Oriental (now Union), Asiatic (now Soorah), Clive, Bengal Pressing and Manufacturing Co. (now the Bellaghatta-Barnagore branch mill), Rustomjee (now the Central), Ganges (registered in England), and Hastings, owned by Messrs. Birkmyre Bros., of Greenock fame—in all thirteen new companies, coming on all of a heap and swelling the total looms from 1,250 up to 3,500. This was too much of a strain for the new industry, and for the next ten years all the mills had a severe struggle. The older ones all survived the ordeal, but four of the new concerns—the Oriental, the Asiatic, the Bengal Pressing and Manufacturing Co. and the Rustomjee—became moribund, to appear again later on under new names and management. Fort Gloster also suffered badly.

Between 1875 and 1882 only one new mill was put up. This was Kamarhatty, promoted by Messrs. Jardine, Skinner & Co., which came into being in 1877, as the result of Dr. Barry's visit to Calcutta in 1876, when he transferred the agency of the Gouripore Co. from Messrs. Jardine, Skinner & Co. to his own firm. This mill, together with additions made by some of the other mills, brought the total looms up to 5,150 in 1882. By the end of 1885 the total was further augmented by the Hooghly, Titaghur, Victoria and Kanknarrah mills, bringing the number of looms at work up to 6,700. From this period on to 1894 no new mills came into existence except the Calcutta Twist Mill, with 2,460 spindles, since merged into the Wellington branch of the Champdany Co. Between 1896 and 1900 the following new mills were started:—the Gordon Twist Mill with 1,800 spindles (now acquired by Anglo-India), Khardah, Gondolpara (French owned), Alliance, Arathoon, Anglo-India, Standard, National, Delta (which absorbed the Serajgunge), and the Kinnison. A lull of four years witnessed large extensions to the existing mills, after which came the following series of new

mills, besides further heavy extensions—Dalhousie, Alexandra, Naihati, Lawrence, Reliance, Belvedere, Auckland, Kelvin and Northbrook.

Progress of the Industry.

THE record of the jute industry may well be said to be one of uninterrupted progress. The following statement shews **quinquennial averages** from the earliest year for which complete information is available with actuals for the last three years; and the figures in brackets represent the variations for each period, taking the average of the quinquennium from 1879-80 to 1883-84 as 100. It will be seen that the number of looms and spindles in operation and that of persons employed have increased to a very much larger extent than either the number of mills at work or the amount of capital employed :—

	Number of mills at work.	Authorised Capital (in lakhs of Rs.)	Number (in thousands) of Persons employed.	Looms.	Spindles.
1879-80 to 1883-84 ..	21 (100)	270·7 (100)	38·8 (100)	5·5 (100)	88 (100)
1884-85 to 1888-89 ..	24 (114)	341·6 (126)	52·7 (136)	7 (127)	138·4 (157)
1889-90 to 1893-94 ..	26 (124)	402·6 (149)	64·3 (166)	8·3 (151)	172·6 (196)
1894-95 to 1898-99 .	31 (148)	522·1 (193)	86·7 (223)	11·7 (213)	244·8 (278)
1899-1900 to 1903-04 ..	36 (171	680 (251)	114·2 (294)	16·2 (295)	334·6 (380)
1904-05 to 1908-09 ..	46 (219)	960 (355)	165 (425)	24·8 (451)	510·5 (580)
1909-10 to 1913-14 ..	60 (286)	1,209 (443)	208·4 (537)	33·5 (609)	691·8 (786)
1914-15 .. .	70 (333)	1,394·3 (515)	238·3 (614)	38·4 (698)	795·5 (904)
1915-16	70 (333)	1,322·6 (488)	254·1 (655)	39·9 (725)	812·4 (923)
1916-17 .. .	74 (352)	1,395·5 (516)	262·6 (677)	39·7 (722)	824·3 (937)
1917-18 .. .	76 (362)	1,428 5(528)	266· (686)	40·6 (738)	834 (948)
1918-19	76 (362)	1,477 2(546)	275·5 (710)	40· (727)	839·9 (954)
1919-20	76 (362)	1,563·5(577)	280·4 (723)	41·0 (745)	856·3 (973)

The production of the mills has increased to a still greater extent. The following figures show the exports of jute manufactures and the declared values for the same periods :—

	Jute manufactures. Gunny bags in millions of number.	Gunny cloths in millions of yards.	Value in lakhs of Rs.
1879-80 to 1883-84	54·9 (100)	4·4 (100)	124·9 (100)
1884-85 to 1888-89	77 (140)	15·4 (350)	162·9 (130)
1889-90 to 1893-94	111·5 (203)	41 (932)	289·3 (232)
1894-95 to 1898-99	171·2 (312)	182 (4,136)	518 (415)
1899-1900 to 1903-04..	206·5 (376)	427·2 (9,709)	826·5 (662)
1904-05 to 1908-09	257·8 (469)	698 (15,864)	1,442·7 (1,154)
1909-10 to 1913-14	339·1 (618)	970 (2,045)	2,024·8 (1,621)
1914-15	397·6 (724)	1,057·3 (24,030)	2,582 (2,067)
1915-16	794·1 (1447)	1,192·3 (27,098)	3,797·8 (3,041)
1916-17	805·1 (1,466)	1,230·9 (27,975)	4,167·2 (3,336)
1917-18	758·4 (1,38.)	1,196 8 (27,200)	4,284·3 (3,430)
1918-19	583·1 (1,062)	1,103·2 (25,072)	5,265·2 (4,215)
1919-20	342·7 (624)	1,275·1 (28,980)	5,001·5 (4,004)

Up to the last quinquennium the **exports of raw jute** were marked by increases from year to year though the improvement was not so rapid as in the case of manufactures. A slight decrease in the exports occurred in 1909-10 as compared with the figures for the preceding quinquennial period and a further decline in 1910-11, but a marked recovery was made in 1911-12 which was accentuated in 1912-13 :—

	Jute, raw, in millions of cwt.	
1879-80 to 1883-84	7·5	(100)
1884-85 to 1888-89	8 9	(119)
1889-90 to 1893-94	10	(133)
1894-95 to 1898-99	12·3	(164)
1899-1900 to 1903-04 ..	12·7	(169)
1904-05 to 1908-09	15·09	(201)
1909-10..	14·6	(195)
1910-11..	12·7	(169)
1911-12..	16·2	(216)
1912-13..	17 5	(233)
1913-14..	15·4	(205)
1914-15..	10·1	(135)
1915-16..	12	(160)
1916-17..	10·8	(144)
1917-18..	5·6	(74)
1918-19..	7·9	(105)
1919-20..	11·8	(157)

The total quantity of jute manufactures exported by sea from Calcutta during the official year ending 31st March 1918 was 716,000 tons as against 784,800 tons in the preceding year 1916-17 and 603,500 tons in the pre-war year 1913-14. In 1917-18 gunny bags contributed 404,000 tons and gunny cloth 307,000 tons as against 461,800 tons and 317,800 tons, respectively in the preceding year (1916-17) and 324,300 tons and 275,100 tons respectively in the pre-war year (1913-14). The total value of jute manufactures exported during the year 1917-18 was £28 millions as against £27 millions in the preceding year and £19 millions in the pre-war year (1913-14).

The price of raw jute reached a very high point in 1906-07, the rate being Rs. 65 per bale; in 1907-08 it dropped to Rs. 42 per bale, and the fall was accentuated in 1908-09 and 1909-10, the price having declined to 36·4 and Rs. 31 per bale respectively. In 1910-11 the price rose again to Rs. 41-8-0, to Rs. 51-4-0 in 1911-12 and further to Rs. 76-12-0 in 1913-14. The following are the quinquennial average prices per bale (400 pounds) of ordinary jute calculated from the prices current published by the Bengal Chamber of Commerce :—

	Price of jute, ordinary, per bale of 400 lbs. Rs.	a.	p.	
1879-80 to 1883-84	23	8	0	(100)
1884-85 to 1888-89	23	3	2	(99)
1889-90 to 1893-94	32	6	5	(138)
1894-95 to 1898-99	30	12	0	(131)
1899-1900 to 1903-04 ..	32	1	7	(137)
1904-05 to 1908-09	44	13	6	(191)
1909-10..	31	0	0	(132)
1910-11..	41	8	0	(177)
1911-12..	51	4	0	(218)
1912-13..	54	12	0	(233)
1913-14..	76	12	0	(327)
1914-15..	54	8	0	(232)
1915-16..	48	4	0	(205)
1916-17..	50	12	0	(216)
1917-18	38	8	0	(164)
1918-19	60	0	0	(255)
1919-20	77	8	0	(330)

The average **prices of gunny cloth** have been as follows :—

	Price of Hessian cloth 10½oz. 40" per 100 yds. Rs.	a.	p.	
1879-80 to 1883-84	10	7	11	(100)
1884-85 to 1888-89	8	0	7	(77)
1889-90 to 1893-94	10	6	6	(99)
1894-95 to 1898-99	9	11	8	(93)
1899-1900 to 1903-04 ..	10	2	10	(97)
1904-05 to 1908-09	11	14	1	(112)
1909-10..	9	3	6	(88)
1910-11..	9	5	6	(89)
1911-12..	11	14	0	(113)
1912-13..	16	6	0	(156)
1913-14..	17	0	0	(162)
1914-15..	12	4	0	(117)
1915-16..	20	10	0	(197)
1916-17..	17	6	0	(166)
1917-18..	33	8	0	(319)
1918-19..	33	0	0	(314)
1919-20..	28	0	0	(267)

The 1921 crop.—The final figures of outturn for the three provinces work out as follows :—

Province.	Bales. 1921.	1920.
Bengal (including Cooch Behar)..	7,637,630	5,304,836
Bihar and Orissa (including Nepal)	570,720	388,356
Assam	332,400	259,000
Total ..	8,540.750	5,962,192

Province.	Area in acres. 1919.	1920.
Bengal (including Cooch Behar)	2,498,145	2,205,323
Bihar and Orissa	203,430	178,750
Assam	137,300	*124,600
Total ..	2,838,875	*2,508,673

* Revised.

The Indian Jute Mills Association now one of the most important, if not the most important, of the bodies affiliated to the Bengal Chamber of Commerce, was started under the following circumstances:—In 1886 the existing mills, finding that, in spite of the constant opening up of new markets, working results were not favourable, came to an agreement, with the late S. E. J. Clarke, Secretary to the Chamber of Commerce, as trustee, to work short time. The only mills which stood out of this arrangement were the Hooghly and Serajgunge. The first agreement, for six months dating from 15th February 1886, was subsequently renewed at intervals without a break for five years up to February 15, 1891. The state of the market at the time of the renewals dictated the extent of the short time, which varied throughout the five years between 4 days a week, 9 days a fortnight and 5 days a week. Besides short time, 10 per cent. of the sacking looms were shut down for a short period in 1890. An important feature of this agreement was a mutual undertaking by the parties not to increase their spinning power during the currency of the agreement, only a few exceptions being made in the case of a few incomplete new mills.

The officials of the Association are:—

Chairman.—Mr. D. P. McKenzie, M.L.C.

Members of Committee.—Sir Alex. Murray, Mr. D. S. K. Greig, Mr. J. Bell Robertson and Mr. G. F. Rose.

Working days.—With the introduction of the electric light into the mills in 1896, the working day was increased to 15 hours, Saturdays included, which involved an additional amount of cleaning and repairing work on Sundays. In order to minimise this Sunday work and give them a free Sunday, an agitation was got up in 1897 by the Mill European assistants to have the engines stopped at 2 or 3 p.m. on Saturdays. The local Government took the matter up, but their action went no further than applying moral suasion, backed by a somewhat half-hearted threat. The Mill Association held meetings to consider the question and the members were practically agreed as to the utility of early closing on Saturdays, but, *more suo*, could not trust themselves to carry it out without legislation. Unfortunately the Government of India refused to sanction the passing of a Resolution by the provincial Government under the Factory Act and the matter was dropped. Only a year or two ago the Jute Mills Association in despair brought out an American business expert, Mr. J. H. Parks, to advise them on the possibility of forming a jute trust with a view to exercising some control over the production and price of jute. Mr. Parks came, and wrote a report which the Association promptly pigeon-holed because the slump was over and the demand was so prodigious that there was no need to worry about the price of jute.

An Association, styled the **Calcutta Jute Dealers Association**, has lately been formed in Calcutta to promote and to guard the common interests of its members as dealers in jute for local consumption. The members are balers and brokers of jute for sale to the jute mills in and around Calcutta. Committee:—Mr. Geo. Morgan, M.L.C., *Chairman*, Members:—Messrs. H. K. Banks, G. C. Moon, H. F. Mytton, H. M. Sherman and A. Smith.

Effects of the War.—The official review of the Trade of India in 1916-17 says:—The value of the exports of raw jute increased in 1916-17 by nearly Rs. 65 lakhs to Rs. 1,629 lakhs. The quantity exported, however, was less than in the preceding year. The estimated yield of the crop was 12 per cent. above that of the previous year, *viz.*, 1,490,000 tons or 8,340,000 bales. Owing to the lack of tonnage and other abnormal circumstances brought about by the war, the quantity exported was 10 per cent. below that of the previous year. Of the consumers the United Kingdom and Italy took less, while the United States, France (mainly *via* Dunkirk), Russia (*via* Vladivostok) and Brazil took greater quantities. There were, of course, no exports to enemy countries which, took more than 27 per cent. in the five years ending 1913-14, the pre-war year. The increase in the value accompanied by a decrease in the volume of exports was due to the very high range of prices during the months of September, October, November and December. Towards the close of the year under review prices steadily declined, and have since gone still lower.

Jute Manufactures.—The value of the exports now approximates to Rs. 42 crores. In spite of the war with its attendant difficulties of freight and finance, the exports of gunny cloth showed an increase of Rs. 241 lakhs of which Rs. 163 lakhs were due to higher prices and Rs. 78 lakhs to an increase in the volume of exports. There were also an increase of Rs. 118 lakhs in the value of gunny bags exported. The number of bags shipped increased while the weight decreased, sand bags for war purposes being lighter than the ordinary bags for transporting grain. Exports to Australia in 1916-17 were a record. The United Kingdom with Australia took more than half of the number of bags exported while the United States took more than half of the quantity of cloth exported.

There were 74 mills at work throughout the year with 30,697 looms and 824,315 spindles. The number of persons employed was 262,552. There were no difficulties as regards the supply of labour. Four new mills came into existence. It is improbable that these, with one exception, can begin manufacturing to any extent until after the war.

Hemp and Jute Substitutes.

Experiments have been made during the last few years by the Agricultural Department of the Government of India with the **Deccan hemp** plant (*Hibiscus cannabinus*), which yields a fibre very similar to jute. As a result, a new variety of the plant, known as Type 3, has been obtained, which it is now proposed to introduce into several parts of India, and, as a beginning, the variety is to be grown on a number of estates in Bihar. A sample of the fibre prepared from this variety by the usual methods of retting was 10 ft. to 12 ft. long, of an exceptionally light colour, well cleaned, and of good strength. It was valued at £18 per ton with Bimlipatam jute at £12 10s., and Bengal first mark jute at

£17 per ton. Deccan hemp has been grown fairly extensively in Bombay, the Central Provinces, and Madras, where it is used for ropes and cordage and also for the manufacture of a coarse sackcloth. A valuable feature of the plant is its suitability for cultivation in such parts of India as are not suitable for jute.

Prior to the war, the United Kingdom's requirements of hemp were mainly supplied by the following countries in order of importance:—the Philippine Islands, New Zealand, India, Russia, Italy and Germany. The opinion appears to be held that the effect of the war will be to cause very considerable changes in the character of the fibre market. There will probably be labour difficulties, it is thought, in the preparation of the hemp crops of Russia and Hungary, and it is not unlikely that the world will look to countries such as India for the supply of fibres which may be used as substitutes for the European varieties of hemp. There can be no doubt that one of the early effects of the war was to firm up hemp prices. As far as Indian hemp is concerned, values were persistently depreciated during the first six months of 1914 owing to large stocks held; but the closure of the Russian hemp market on the outbreak of war resulted in a marked improvement in values, and there was a keen demand and a considerable rise in price.

THE WOOL INDUSTRY.

Wool exported from India consists not only of wool grown in India itself, but of imports from foreign sources, these latter coming into India both by land and by sea. Imports by sea come chiefly from Persia, but a certain quantity from Persia also comes by land, while the main imports are from Afghanistan, Central Asia, Tibet and Nepal. Quetta, Shikarpur, Amritsar and Multan are the main collecting centres for wool received by land from Afghanistan and Persia, whence it is almost invariably railed to Karachi for subsequent export overseas.

Imports and Exports.—A considerable amount of wool is imported annually from Tibet and, in normal years, from Afghanistan. In 1913-14 imports of wool manufactures from the British Empire were valued at Rs 223 lakhs and from foreign countries at Rs. 132 lakhs. In 1919-20 those figures fell to Rs. 138 lakhs and Rs. 22 lakhs. But in 1920-21 imports of woollen manufactures rose to Rs 553 lakhs.

The export trade in wool was seriously hit by trade depression in 1920-21. Control was abolished in July 1920, but in spite of that exports, which had amounted to 47 million lbs in 1918-19 and to 36 million lbs in the following year, fell in 1920-21 to 23 million lbs.

Production in India.—The production of wool in India is estimated at 60 million lbs, the estimate being arrived at from the available figures of the number of sheep in the country and their estimated yield per fleece, the average quantity of wool yielded per sheep per annum being taken at only 2 lbs.

All Indian wools are classed in the grade of **carpet wools**, and it is correct to say of perhaps fully half the breeds of sheep found on the plains of India that they yield a kind of hair rather than of wool. They are reared chiefly on account of the mutton, and the fleece has been generally regarded as of subsidiary interest. In many respects, in actual fact, the Indian plains sheep approximate more nearly to the accepted type of the goat rather than of the sheep. Short remarks in his manual on Indian cattle and sheep, particularly with respect to the Madras type, that they "resemble a greyhound with tucked up belly, having some coarseness of form, the feet light, the limbs bony, sides flat and the tail short."

Mill manufacture.—The number of woollen mills at work in British India in 1902 was three, with an authorised capital of Rs. 38,50,000, and employing 23,800 spindles and 624 looms. The number of persons employed in the industry then was 2,559, and the quantity of woollen goods produced 2,148,000 lbs. At the end of 1917 the number of mills had risen to five, with an authorised capital of Rs. 2,56,50,000 employing 39,608 spindles and 1,155 looms. The weight of goods produced then was 9,744,264 lbs. and the number of persons employed 7,824. With regard to Indian States, there was one mill in Mysore in 1903 with a capital of Rs. 6,00,000, employing 1,430 spindles and 45 looms. The quantity of goods produced was 1,136,000 lbs. and the number of persons employed 297. In 1907 there was still only the one mill working in an Indian State—the authorised capital had been increased to Rs. 15,00,000, the quantity of goods produced to 1,724,087 lbs, and the number of persons employed to 563. Three of the mills manufacture all classes of woollen and worsted goods, the remainder manufacturing blankets only. The existence of these mills in India proved of great service to Government in the meeting of war requirements, and they were all employed to their fullest capacity in supplying army demands for greatcoat cloth, serges, puttees, flannels, blankets and hosiery. Their total capacity, however, was not sufficient to meet the full requirements of the army, and consequently their supplies had to be supplemented by large imports from home. The bulk of the wool used by the Indian mills is Indian wool, although it is supplemented to some extent by the importation of merinos and cross-breds from Australia for the manufacture of the finer classes of goods. Their market for manufactured goods is almost entirely in India itself.

Blanket weaving and carpet manufacture are carried on in various parts of the country, notably in the Punjab and the United Provinces. Woollen pile carpets are made in many of the jails. Amritsar had a considerable trade at one time in weaving shawls from *pashm*, the fine under fleece of the Tibetan goat, but its place has been taken to some degree by the manufacture of shawls from imported worsted yarns, but more generally by the manufacture of carpets of a fine quality which find a ready sale in the world market. This work is done entirely on hand looms and the carpets fetch a high price.

Bibliography.—Notes on wool in India. By A. H. Silver and J. K. Mehta, (Govt. Press, Calcutta: 1919).

Hydro-Electric Development.

India promises to be one of the leading countries of the world in regard to the development of hydro-electric power and great strides in this direction have already been made. India not only specially lends itself to projects of the kind, but peremptorily demands them. Cheap motive power is one of the secrets of successful industrial development and the favourable initial conditions caused by the war, the enthusiasm for industrial development which has seized nearly all classes of educated Indians, and the special attention which the circumstances of the war have compelled Government to direct towards the scientific utilisation of Indian natural resources all point to a rapid growth of industrial enterprise in all parts of India within the next few years. Indeed, the process, for which sound foundations had been laid before the war, is now rapidly under way. India is severely handicapped compared with other lands as regards the generation of power by the consumption of fuel, coal or oil. These commodities are all difficult to obtain, and costly in India except in a few favoured areas. Coal supplies, for example, are chiefly centred in Bengal and Chota Nagpur and the cost of transport is heavy. Water power and its transmission by electricity offer, on the other hand, immense possibilities, both as regards the quantity available and the cheapness at which the power can be rendered, in all parts of India.

Water power schemes, pure and simple, are generally difficult in India, because the power needs to be continuous, while the rainfall is only during a small portion of the year. Perennial rivers with sufficient water throughout the year are practically non-existent in India. Water, therefore, must be stored for use during the dry season. Favourable sites for this exist in many parts in the mountainous and hilly regions where the heaviest rainfalls occur and the progress already made in utilising such opportunities by the electrical transmission of power affords high encouragement for the future. Further, hydro-electric schemes can frequently be associated with important irrigation projects, the water being first used to drive the turbines at the generating stations and then distributed over the fields. Water, as was pointed out in an interesting paper on the subject presented to the Indian Industrial Commission of 1916-18 by Mr.R.B. Joyner, C.I.E., M. Inst.C.E., lately in the Irrigation Branch of the Bombay Public Works Department and engaged in the Tata's Hydro-Electric Works in Western India up to the time of his death, "can be stored in this country at a third or a quarter of the cost which there would be in other countries. This is not merely on account of the cheaper labour, which would be the chief reason in an earthen dam, but in masonry or concrete dams. It is also because we do not use cement, which, for some reason not well-known to me, is generally deemed essential elsewhere, though it cannot really be so suitable."

The Industrial Commission emphasized the necessity for a Hydrographic Survey of India. On this recommendation the Government of India in 1918 appointed the late Mr. G. T. Barlow, C.I.E., then Chief Engineer, Irrigation Branch, United Provinces, to undertake the work, associating with him Mr. J. W. Meares, M.I.C.E., Electrical Adviser to the Government of India. Mr. Barlow died, but Mr. Meares issued a preliminary report in September, 1919, summarising the present state of knowledge of the problem in India and outlining a programme of investigation to be undertaken in the course of the inquiry. Mr. Meares showed that industries in India now absorb over a million horse power, of which only some 285,000 h.p. is supplied by electricity from steam, oil or water. The water power so far actually in sight amounts to 1¼ million horse-power, but this excludes practically all the great rivers, which are at present unmvestigated. Thus the minimum flow of the seven great rivers eastward from the Indus is stated to be capable of giving not less than three million horse-power for every thousand feet of fall from the Himalayas, while similar considerations apply to rivers in other parts. Some doubt is expressed as to the estimate of seven million horse-power in the Irrawaddy and Chindwin rivers, given in the report of the London Conjoint Board of Scientific Studies.

The Report points out that the Bombay Presidency holds a unique position owing to its great existing and projected schemes at Lonavla, the Andhra Valley, the Nila Mula and the Koyna Valley and has the still greater advantage of possessing a firm ready to develop its resources.

Bombay Hydro-Electric Works.

The greatest water-power undertakings in India—and in some respects the greatest in the world—are the Tata hydro-electric schemes recently brought to fruition, and constantly undergoing expansion, for the supply of power in the city of Bombay. Bombay is after London the most populous city in the British Empire and it is the largest manufacturing town in Asia. Its cotton mills and other factories use over 100,000 horse power of mechanical energy and until a year or two ago this was almost entirely provided by steam, generated by coal coming from a distance—mostly Bengal. The Tata Hydro-Electric Power Scheme, now an accomplished fact, marked one of the big steps forward made by India in the history of its Industrial development. It was the product of the fertile brain of Mr. David Gostling, one of the well known characters of Bombay, a little over a decade ago. The exceptional position of the Western Ghats, which rise 2,000 feet from sea-level within a very short distance of the Arabian Sea, and force the monsoon as it sweeps to land, to break into torrential rain at the mountain passes was taken full advantage of, and the table lands behind the Ghats form a magnificent catchment area to conserve this

heavy rainfall in. Mr. Gostling pressed the scheme on the attention of Mr. Jamsetji Tata for years, and with perseverance collected data which he laid before that pioneer of the larger industries in India. He summoned the aid of experts from England to investigate the plan. The scheme was fully considered for six long years. Meanwhile both Mr. J. N. Tata and Mr. David Gostling passed away, but the sons of the former continued the work of their father and on Mr. Gostling's death, Mr. R. B. Joyner's aid was sought to work out the Hydraulic side of the undertaking.

The scheme completed, a syndicate secured the license from Government and an endeavour was made to enlist the support of financiers of England who tried to impose terms which were not acceptable. Meanwhile, the attention of Sir George Clarke (now Lord Sydenham), then Governor of Bombay, and an engineer of distinction himself, was drawn to the scheme. The interest shown by him drew the attention of Indian Chiefs in the Presidency of Bombay and outside it to its possibilities, funds flowed in and a company with an initial capital of 1,75,00,000 Rupees was started.

The hydro-electric engineering works in connection with the project are situated at and about Lonavla above the Bhor Ghat. The rainfall is stored in three lakes at Lonavla, Walwhan and Shirawta, whence it is conveyed in masonry canals to the forebay or receiving reservoir. The power-house is at Khopoli, at the foot of the Ghats, whither the stored water is conveyed through pipes, the fall being one of 1,725 feet. In falling from this height the water develops a pressure of 750 lbs. per square inch and with this force drives the turbines or water wheels. The scheme was originally restricted to 30,000 Electrical horse power, but the Company, in view of the increasing demand for power from the Bombay mills, decided to extend the works by building the Shirawta Dam and issued further Shares bringing the capital to Rs. 3,00,00,000, the capacity of the scheme being increased to more than 40,000 electrical horse power. Issued Capital 7 per cent. Preference 8,735 shares fully paid and Ordinary 18,000, out of which 10,000 are fully paid and 8,000 new shares, on which Rs. 400 have been called up. There is also a Debenture Loan of Rs. 85 lakhs. The works were formally opened by H. E. the Governor of Bombay on the 8th February 1915. At present there are altogether 44 mills with motors of the aggregate B. H. P. of 52,000 H. P. in service. In addition to the cotton and flour mills which have contracted to take supply from the Company for a period of ten years, the Company have entered into a contract with the Bombay Electric Supply and Tramways Company, Limited, and supplies energy to five of their substations. There remain many prospective buyers of electrical energy and the completion of the Company's full scheme will not suffice for all such demands. Besides the Bombay cotton mills, which alone would require about 100,000 horse power, there are, for instance, tramways, with possibilities of suburban extensions. The probable future demand is roughly estimated at about 160,000 H. P.

Investigations undertaken by Mr. H. P. Gibbs, with a view to further developing the electrical supply led to the discovery of a highly promising water storage site in the valley of the Andhra River, situated near the present lakes previously overlooked, as altogether different treatment and design were required. In this instance the draw off point is 11 miles upstream from the dam and at a level 112 ft. above the lowest river bed level at the dam. The water is taken through a tunnel 8,700 ft. long driven in solid trap rock through the scarp of the ghauts of which the pressure pipes are an extension. Seventy feet of the upper water in the lake can be drawn off comprising 75 per cent. of the total amount of water stored, both above and below draw off level. A scheme was prepared, to be carried out by a separate company and providing for holding up the Andhra River by a Dam, about a third of a mile long and 192 feet high, at Tokerwadi. This dam will hold up a lake nearly twelve miles long, the further end of which approached the brink of the Ghats at Khand. Here, a tunnel, a mile and a quarter long, will carry the water to the surge chamber, whence it will enter the pipes for a vertical drop of about 1,750 feet to the generating station at Bhivpuri, about 17 miles from the generating station at Khopoli. The scheme is designed to yield 100,000 horse power in its full development. A new company to operate the scheme was formed on the 31st August 1916, with an initial capital of Rs. 2,10,00,000, divided into 160,000 Ordinary shares of Rs. 1,000 each and 5,000 Preference shares of Rs. 1,000 each, this being the Andhra Valley Power Supply Company, Limited. This Company will pay annually to the Tata Hydro-Electric Power Supply Company 15 per cent. upon the profits (after making certain deductions), or a sum of Rs. 50,000, whichever shall be the larger sum, the intention being that the new company shall pay annually to the Tata Hydro-Electric Power Supply Company a minimum sum of Rs. 50,000. The areas intended to be supplied by this Company are the town and island of Bombay and the Suburban Municipalities of Bandra and Kurla. The Hydraulic Works consisting of the Dam, the Tunnel and the Pipe Lines, are already well in hand and have shown three seasons' satisfactory progress. Contracts for machinery have been satisfactorily entered into with manufacturers of repute. It is estimated that supply of power will commence next year.

Just as the Andhra project has been developed as a northward extension of the original scheme, so a southward development also originated by Mr. Gibbs and developable on lines similar to those of the Andhra project, is now being carried out under the name of the Nila-Mula scheme, the name arising from the fact that the valleys of the Nila and Mula rivers are being dammed for the conservation of water for it. A company entitled The Tata Power Co., Ltd., was floated in the autumn of 1919 for the purpose, having a capital of Rs. 9 crores, divided into 30,000 7½% cumulative preference shares of Rs. 1,000 each and 60,000 shares of Rs. 1,000 each, the first and present issue being of 10,000 preference shares and 35,000 ordinary shares. One lake will be formed and from it water will be conducted direct through a short tunnel to a pipe descent to a turbine power house 1,750 feet below the forebay. The head

of water will suffice to generate 150,000 horse power and the length of the transmission line to Bombay will be 70 miles. Half of the scheme, *i. e.*, for the supply of 75,000 h. p., will first be completed and is expected to come into operation in about four years the construction works at present are in progress and lands on being acquired for the Dam and the lake sites.

Nearly 100 miles southward of this Messrs. Tata propose to erect two dams in the huge valley of the Koyna river, proposed by Mr. A. T. Arnall and developable on lines similar to the two projects by Mr. Gibbs above mentioned partly to supply power to Bombay and partly to develop a great assembly of electro-chemical industries near the power installation. The preliminary.
investigations for this scheme are still proceeding. The catchment area for the lake will be 346 square miles and there will be a total storage after the rains of 112,600 million cubic feet, which will be sufficient to supply a normal load of 350,000 horse power for 8,000 hours per year The preliminary estimates provided for a capital of Rs. 8·10 lakhs to carry out the scheme.

Mysore Installation.

The first hydro-electric scheme undertaken in India or, indeed, in the East, was that on the River Cauvery, in Mysore State, which was inaugurated, with generating works at Sivasamudram, in 1902. The Cauvery rises in the British district of Coorg, and flows right across Mysore. The first object with which the installation was undertaken was the supply of power to the goldfields at Kolar. These are 92 miles distant from Sivasamudram and for a long time this was the longest electrical power transmission line in the world. Current is also sent to Bangalore, 59 miles away, where it is used for both industrial and lighting purposes.

The initial undertaking has constantly been expanded since its inauguration, so that its total capacity, which was at first 6,000 horse power, is now approximately 25,000 h.p. This is the maximum obtainable with the water which the Cauvery affords and, therefore, with the number of consumers, large and small, rapidly increasing, the necessity of a completely new installation elsewhere, to be operated in parallel with or separately from that at Sivasamudram, has been recognised. Two projects offer themselves. The first would involve the use of the River Shimsha, a tributary of the Cauvery which has natural falls, and the second, known as the Mekadatu project, would have its power house on the Cauvery, 25 miles down-river from Sivasamudram and just within the borders of Mysore State, adjacent to the Madras Presidency. The head of water available at Sivasamudram is 400 feet, that on the Shimsha 618 feet net, which would generate 39,500 e. h. p. At Mekadatu the Cauvery runs in rapids and a dam and a channel 20,000 feet long with a 22½ feet bed would be necessary. There would be three generating units, each giving an output of 4,000 e. h. p. Future extensions yielding an additional 8,000 h. p. could be made. The progressive spirit which has marked the management of the works since their inception now characterises the manner in which the problem of further extensions are being considered.

Works in Kashmir.

A scheme of much importance from its size, but more interesting because of the developments that may be expected from it than for the part which its current supply already plays in the life of the countryside, is one installed a few years ago by the Kashmir Durbar, utilising the River Jhelum, near Baramulla, which lies thirty-four miles north-west of Srinagar. The head-works of the Jhelum power installation are situated six and a half miles from the power house and the main connection between the two is a great timber flume. These works and the forebay at the delivery end of the flume have a capacity for carrying water sufficient for the generation of 20,000 electrical horse power. Four pipes 600 feet long lead from the forebay to the power house, and from forebay to water-wheel there is an effective head of 395 feet. There are four vertical waterwheels, each coupled on the same shaft to a 1,000 k.w., 3-phase, 2,300 volt, 25-period generator running at 500 r.p.m., and each unit is capable of taking a 25 per cent. overload, which the generator end is guaranteed to maintain with safety for two hours. The power house is of sufficient capacity to allow of 15,000 k.w. generating plant being installed within it. Two transmission lines run side by side as far as Baramulla, 21 miles distant, at which point one terminates. The other continues to Srinagar, a further 34 miles. The installation at Baramulla was originally utilised for three floating dredgers and two floating derricks, for dredging the river and draining the swampy countryside and rendering it available for cultivation, but these operations have temporarily been curtailed, so that only one dredger is now in operation. The lighting of Baramulla has been taken in hand with satisfactory results and it is expected that the lighting demand will rapidly increase and that a small demand for power will soon spring up. At Srinagar, the line terminates at the State silk factory, where current is supplied not only for driving machinery and for lighting, but for heating. The greater part of Srinagar city is now electrically lighted and during the past year a motor load of over 100 k.w. has been connected with the mains, motors being hired out to consumers by the Electrical Department. This step was taken with a view to educating the people in the use of electric power and it has been entirely successful.

Silk.

In the early days of the East India Company the Indian Silk trade prospered greatly, and various sub-tropical races of the Silkworm were introduced. But the trade gradually declined for the following reasons:—

In the seventeenth and eighteenth centuries India's chief competitor in the silk trade was the Levant Company. Successful efforts, however, were made to acclimatise in Europe one or two races of a temperate worm, procured from China and Japan. When sericulture became part of the agriculture of France and Italy, a quality of silk was produced entirely different from that of India and Turkey, and its appearance created a new demand and organized new markets.

All subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that could compete with this new industry. On the lower hills of Northern India, on the other hand, a fair amount of success has been attained with this (to India) new worm, as, for example, in Dehra Dun and Kashmir. In Manipur, it would appear probable that *Bombyx mori*, possibly obtained from China, has been reared for centuries. The caprice of fashion has, from time to time, powerfully modified the Indian silk trade. The special properties of the *korah* silk were formerly much appreciated but the demand for them has now declined. This circumstance, together with defective systems of rearing and of hand-reeling and weaving, accounts largely for the present depression in the mulberry silk trade of India.

Mulberry-feeding worms.—Sir George Watt states that in no other country does the necessity exist so pressingly as in India to treat the subject of silk and the silk industries under two sections, *viz.*, Bombycidae, the domesticated or mulberry-feeding silk worms; and Saturniidae, the wild or non-mulberry-feeding worms. In India the mulberry worm (Bombyx Mori) has been systematically reared for many centuries, there being six chief forms of it. In the temperate tracts of India various forms of *Morus alba*, (the mulberry of the European silk-producing countries), are grown specially as food for the silkworm. This is the case in many parts of the plains of Northern India, Baluchistan, Afghanistan, Kashmir, and along the Himalaya at altitudes up to 11,000 feet. The other species even more largely grown for the Indian silkworm is *M. Indica* of which there are many distinctive varieties or races. This is the most common mulberry of Bengal and Assam, as also of the Nilgiri hills.

India has three well-known purely indigenous silkworms . the *tasar*. the *muga* and the *eri*. The first is widely distributed on the lower hills, more especially those of the great central table-land, and feeds on several jungle trees. The second is confined to Assam and Eastern Bengal, and feeds on a laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant. From an art point of view the *muga* silk is the most interesting and attractive, and the cocoon can be reeled readily. The *eri* silk, on the other hand, is so extremely difficult to reel that it is nearly always carded and spun—an art which was practised in the Khasi Hills of Assam long before it was thought of in Europe.

Experiments and results.—Numerous experiments have been made with a view to improving sericulture in India. French and other experts are agreed that one of the causes of the decline of the silk industry in India has been the prevalence of diseases and parasites among the worms, the most prevalent disease being pebrine. M. Lafont, who has conducted experiments in cross breeding, believes that improvement in the crops will be obtained as soon as the fight against pebrine and other diseases of the worms is taken up vigorously by the producers of seed and the rearers of worms, while improvement in the quality of the cocoons will be obtained by rearing various races, pure and cross breds.

In Kashmir and Mysore satisfactory results have been obtained. In the former State sericulture has been fostered on approved European principles with Italian reeling machinery, seed being imported annually on a large scale. In 1897 in Mysore Mr. Tata, after selecting a plantation and site for rearing houses, sent to Japan for a Superintendent and trained operatives. The Mysore authorities have made a grant of Rs. 3,000 a year to the Tata farm in return for instruction given to the people of Mysore in Japanese methods of growing the mulberry and rearing the insects. The products of the Mysore State are exported to foreign countries from Madras. The work of the Salvation Army is also noteworthy in various parts of India. They have furnished experts, encouraged the planting of mulberry trees, and subsidised several silk schools. The draft prospectus has been issued of a silk farm and institute to be started at Simla under the auspices of the Salvation Army. The Lieut. Governor of the Punjab has permitted the school to be called after his name, and the Punjab Government made a grant of Rs. 2,000 towards the expenses. Sir Dorabji Tata has also made a donation of Rs. 1,000. The Bengal Silk Committee under the guidance of some French experts have conducted cross-breeding experiments with a view to establish a multivoltine hybrid of European quality. There is a Government sericultural farm at Berhampore, where, it is said, a pure white multi-voltine of silk worm is reared. The results of the Bengal Committee's labours may be summed up as follows : the only really effective method of dealing with the problem is to work up gradually to a point at which the whole of the seed cocoon necessary for the province will be supplied to rearers under Government supervision, and to establish gradually a sufficient number of large nurseries throughout the silk districts of the province.

In 1915 there was issued by the Agricultural Research Institute, Pusa, a *Bulletin* (No. 48 of 1915) entitled "First Report on the Experiments carried out at Pusa to improve the Mulberry Silk Industry." In a short Prefatory note Mr. Bainbrigge Fletcher (Imperial Entomo-

logist) explains that the object of the Bulletin is to place on record some of the more important experiments which were commenced at Pusa in the year 1910 and have since been carried on in the endeavour to fix a superior multivoltine race of the Mulberry Silkworm which would not degenerate and which would yield silk better both in quality and outturn than that supplied by the multivoltine races which are reared at present.

Central Nurseries.—The report of the Agricultural Department, Bengal, for the year ending June 30, 1913, gives an account of a scheme which has been devised with the object of reclaiming the silk industry. The aim of the scheme is gradually to establish throughout the silk districts a sufficient number of central nurseries with rearing houses and thus enable the whole of the seed cocoons required in the province to be supplied under Government supervision. It is believed that this is the only really effective method of dealing with the problem. A number of the existing smaller nurseries were closed during 1913 and others are being converted into enlarged and improved central nurseries with rearing houses complete. The ultimate success of the scheme depends largely on the willingness of the rearers to pay an adequate price for pure seed.

A pamphlet was published in 1915, by Mr. M N. De, Sericultural Assistant at Pusa, which contains practical hints on improved methods which are recommended to be used for reeling mulberry silk in Bengal and other silk producing districts. It has been found that, by the provision of two small pulleys to the ordinary Bengal type of reeling machine, superior thread can be obtained, the cost of the extra apparatus is merely nominal (five or six annas per machine), whilst the suitability of the machine for cottage workers is maintained. By attention to such simple points as the stifling and storage of cocoons and the temperature and quality of the water used in the reeling pans, great improvements can be effected in most silk centres in Bengal and other districts.

Exports of Silk.—As a result of the war the trade has showed in some degree signs of revival from its decadent condition, both as regards its volume and value. The value of exports during 1915-16 improved by Rs. 12 lakhs to Rs. 27½ lakhs, of which raw silk accounted for Rs. 24 lakhs. In 1916-17 the total exports rose to Rs. 54½ lakhs. Post-war exports show a decline compared with those in the year 1913-14 For example in 1920-21 exports of silk yarn amounted to 783,448 lbs., compared with 1,167,530 lbs in 1913-14; Silk piece-goods exported were 22,432,974 yards compared with 27,338,272 yards; and Silk mixed goods exported were 1,913,448 yards compared with 8,163,963 yards.

Imperial Silk Specialist.—At the end of 1915 it was decided that the first step to be taken to revive the silk industry should be the employment of a qualified expert who, after a careful study of the conditions not only in India but in other silk-producing countries, will formulate recommendations for the consideration of Government. With the approval of the Secretary of State, Mr. H. Maxwell Lefroy, formerly Imperial Entomologist and now Professor at the Imperial College of Science and Technology, South Kensington, was appointed to the temporary post of Imperial Silk Specialist.

Indigo.

Indigo dyes are obtained from the Indigofera, a genus of Leguminosae which comprises some 300 species, distributed throughout the tropical and warm temperate regions of the globe, India having about 40. Western India may be described as the headquarters of the species, so far as India is concerned, 25 being peculiar to that Presidency. On the eastern side of India, in Binar, Bengal, Assam and Burma, there is a marked decrease in the number of species but a visible increase in the prevalence of those that are met with.

There is evidence that when Europeans first began to export the dye from India, it was procured from the Western Presidency and shipped from Surat. It was carried by the Portuguese to Lisbon and sold by them to the dyers of Holland, and it was the desire to obtain a more ample supply of dye stuff that led to the formation of the Dutch East India Company and so to the overthrow of the Portuguese supremacy in the East. Opposition to indigo in 17th century Europe was keen owing to its interference with the wood industry, but it was competition to obtain indigo from other sources than India that led to the first decline of the Indian indigo industry. In the middle of the eighteenth century, when the cultivation of indigo in the West Indies had been given up—partly on account of the high duties imposed upon it and partly because sugar and coffee were found to be more profitable—the industry was revived in India, and, as one of the many surprises of the industry, the province of Bengal was selected for this revival. It had no sooner been organised, however, than troubles next arose in Bengal itself through misunderstandings between the planters, their cultivators and the Government, which may be said to have culminated in Lord Macaulay's famous *Memorandum* of 1837. This led to

another migration of the industry from Lower and Eastern Bengal to Tirhut and the United Provinces. Here the troubles of the industry did not end, for the researches of the chemical laboratories of Germany threatened the very existence of any natural vegetable dye. They first killed the maddar dye of Europe, then the safflower, the lac and the *al* dyes of India, and are now advancing rapidly with synthetic indigo, intent on the complete annihilation of the natural dye. Opinions differ on many aspects of the present vicissitude; meantime the exports from India have seriously declined, and salvation admittedly lies in the path of cheaper production both in cultivation and manufacture. These issues are being vigorously faced and some progress has been accomplished, but the future of the industry can scarcely help being described as of great uncertainty. The issue is not the advantage of new regulations of land tenure, but one exclusively of natural *versus* synthetic indigo. (See Watt's "Commercial Products of India.") In this connection it may be noted that increases in the price of coal in England, due to labour difficulties, have greatly strengthened the position of natural indgo. In February 1915 a conference was held at Delhi when the possibility of assisting the **natural indigo industry** was considered from three points of view—agricultural, research and commercial. The agricultural or botanical side of the question is fully discussed by Mr. and Mrs Howard of Pusa in Bulletins Nos. 51 and 54 of the Agricultural Research Institute. Other aspects of the question were fully examined last year in the Agricultural Journal of India by Mr. W. A. Davis, Indigo Research Chemist to the Government of India. An **Indigo Cess Bill** was passed in the Imperial Legislative Council in 1918. It provides for a cess on indigo exported from India for the scientific investigation of the methods of cultivation and manufacture of indigo, the proceeds of the cess being received and expended by Government.

Decline of the Industry.—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906-07 and 1911-12, the decline continued without a break until the revival due to the impossibility of obtaining artificial dyes in sufficient quantities during the war. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year.

—	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1901-02 ..	791,000	89,750	1,234,837
1902-03 ..	646,000	65,377	803,738
1903-04 ..	707,000	60,410	717,468
1904-05 ..	477,000	49,252	556,405
1905-06 ..	384,000	31,186	390,918
1906-07 ..	421,000	35,102	466,985
1907-08 ..	394,000	32,490	424,849
1908-09 ..	284,000	24,946	326,986
1909-10 ..	289,000	18,061	234,544
1910-11 ..	276,000	16,939	223,529
1911-12 ..	271,000	19,155	250,535
1912-13 ..	220,000	11,857	147,000
1913-14 ..	176,000	10,939	142,000
1914-15 ..	148,400	17 142	599,940
1915-16 ..	314,300	41,942	1,385,428
1916-17 ..	756,400	33,500	1,383,000

Present Position.—The crop is most important in Bihar and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planters' Association, with the aid of a grant from Government since 1897.

The cessation of the imports of synthetic dyes from Germany during the war brought about a recovery in the indigo trade which was mainained in 1919-20. In 1920-21 the exports collapsed to less than one third of the previous year. Only 10,250 cwts of indigo were exported mainly to Japan (5,800 cwts.). Egypt (1,400 cwts.) and the United Kingdom (1,100 cwts.) Japan took a little over a fourth of the previous year's requirements; the reduction in the demand was due to over-trading and high stocks in Japan. Egypt took less than a fourth as she met her requirements by German synthetic dyes. Asiatic Turkey took only 700 cwts. in place of 3,400 cwts. in 1919-20. In Bihar and Orissa the weather was unfavourable and the area sown was greatly reduced as a result of the increased cultivation of food crops, while in Madras, owing to a favourable season, the area increased. The total yield of indigo in India during the year was estimated at 40,000 cwts., an increase of 6 per cent. over 1919-20. Prices of Bihar indigo in the local sales ranged betwsen Rs. 247-8 to Rs. 480 per factory maund in 1920-21 The cess on indigo exports yielded only Rs. 13,000.

Tea.

Tea cultivation in India is chiefly in Assam, Bengal and Southern India, the cultivation elsewhere being comparatively unimportant. The latest available official general statistics are those for the year 1920. (The statistics of production deal, for seasonal reasons, with the calendar year 1920 and those of trade with the official fiscal year 1920-21.) They show a total area of 701,100 acres under tea, or 1·3 per cent. more than in 1917. Of this area, 647,300 acres were plucked in 1920. The total number of plantations was 5,054 against 4,221 in 1919. The area under cultivation increased in the 5 years ended 1914 by 10 per cent. but in the quinquennium 1905-1909 the increase in production was only 1 per cent. The average production per acre for the whole of India, excluding Burma (where the produce of the tea gardens is almost wholly converted into wet pickled tea, which is eaten as a condiment, was 534 lbs. in 1920 as compared with 588 lbs. in 1919.

Area and Production.

The total area under tea was divided between the different Provinces as follows :—

	Acres.
Assam—	
Brahmaputra Valley	266,030
Surma Valley (Cachar and Sylhet) ..	154,133
Total, Assam ..	420,200
Bengal	172,400
Bihar and Orissa (Chota Nagpur) .	2,100
United Provinces	6,723
Punjab	9,744
Madras	41,149
Travancore and Cochin	47,105
Burma	1,700
Grand Total ..	701,103

The total production in 1920 was 345,339,576 lbs. against 377,055,639 lbs. in the preceding year divided between the different parts of India as follows :—

	Lbs.
Assam	234,314,061
Bengal .. .	71,696,567
Bihar & Orissa . ..	384,514
United Provinces	1,491,887
Punjab	1,663,547
Madras	12,255,755
Travancore & Cochin	23,399,123
Burma	134,122
Total ..	345,339,576

Features of the Trade.

The quantity exported by sea in 1920-21 was 285,752,000 lbs., as against 379,196,000 in the preceding year, which was the highest on record. The decrease amounts to 25 per cent.

The main features of the year's exports were : (1) an increase in the exports to Arabia, Asiatic Turkey, Ceylon and Egypt, and (2) a large decrease in the exports to the United Kingdom, France, Cape Colony, the United States, Canada, and Chile. Shipments to the United Kingdom, which has been India's best customer throughout, decreased by 88 million lbs to 249 million lbs. Russia, the next best customer in pre-war days did not take any tea from India in 1920-21, by direct shipment. The other countries in Europe took very little Indian tea direct from India, the total shipments to Europe excluding the United Kingdom being only 192,000 lbs. as against 1,747,000 lbs. in 1919-20. The total exports to Africa also showed a decline of 300,000 lbs., although an increased quantity was taken by Egypt, the principal African consumer of Indian tea. Shipments to America also declined by over 5 million lbs., all the principal importers, namely, Canada, the United States, and Chile having diminished their imports. Exports to Asiatic countries, however, showed an increase of nearly 3 million lbs, all the four principal importers, namely, Arabia, Ceylon, Persia, and Asiatic Turkey, having taken larger quantities. Australia, New Zealand and the Fiji Islands together took a million pounds less than in the preceding year. The bulk of the exports by land goes to Afghanistan and other countries beyond the North-West Frontier. If the exports both by sea and by land are taken together, the net decrease in 1920-21 was nearly 95 million lbs. or 25 per cent.

EXPORTS AND PRICES.

The following table shows the quantity of Tea exported by sea and by land to Foreign Countries from India, Ceylon, and China in the years 1896-97 to 1920-21 with variations in index numbers, taking the figure of 1896-97 as 100‡ :—

	India.	Ceylon.*	CHINA†		Java.
			Black and green.	Brick, table & dust	
	lbs.	lbs.	lbs.	lbs.	lbs.
1896–97	150,421,245 [100]	110,095,194 [100]	161,538,933 [100]	78,567,333 [100]	...
1897–98	152,344,905 [101]	114,460,318 [104]	137,097,600 [85]	75,781,867 [98]	..
1898–99	158,539,488 [105]	122,395,518 [111]	147,967,200 [91]	68,017,067 [87]	. .
1899–1900	177,163,999 [118]	129,661,908 [118]	153,669,067 [95]	71,205,067 [91]	. .
1900–01	192,300,658 [128]	149,264,603 [136]	144,270,933 [90]	52,190,667 [66]	.
1901–02	182,594,356 [121]	144,275,608 [131]	119,390,000 [74]	42,740,533 [54]	.
1902–03	183,710,931 [122]	150,829,707 [137]	128,226,933 [79]	78,512,400 [100]	. .
1903–04	209,552,150 [139]	149,227,236 [135]	140,607,867 [88]	83,813,600 [107]	. .
1904–05	214,300,325 [142]	157,929,333 [143]	132,366,933 [83]	61,493,733 [78]	....
1905–06	216,770,366 [144]	171,256,703 [156]	112,152,533 [69]	70,784,267 [91]	25,650,156 [100]
1906–07	236,090,328 [157]	171,558,110 [156]	108,864,534 [67]	79,506,133 [101]	27,455,019 [107]
1907–08	228,187,826 [151]	181,126,298 [164]	130,022,266 [80]	84,940,000 [108]	29,286,402 [114]
1908–09	235,089,126 [156]	181,436,718 [165]	129,265,733 [80]	80,885,733 [103]	36,579,941 [143]
1909–10	250,521,064 [167]	189,585,924 [172]	120,174,800 [74]	79,617,600 [101]	36,679,003 [143]
1910–11	256,438,614 [170]	186,925,117 [170]	123,947,734 [77]	84,158,943 [107]	40,639,185 [158]
1911–12	263,515,774 [175]	184,720,534 [168]	137,788,933 [85]	57,251,467 [73]	50,362,607 [196]
1912–13	281,815,329 [187]	196,632,380 [169]	127,826,800 [79]	69,733,200 [89]	61,691,452 [241]
1913–14	291,715,041 [194]	197,419,430 [179]	103,038,000 [64]	70,061,600 [89]	64,938,907 [253]
1914–15	302,556,697 [201]	191,838,946 [174]	114,689,200 [71]	84,307,733 [107]	71,322,504 [278]
1915–16	340,433,163 [226]	214,900,383 [195]	143,662,000 [89]	93,776,667 [119]	101,603,335 [396]
1916–17	292,594,026 [194]	208,090,279 [189]	126,260,800 [78]	79,259,723 [101]	98,006,121 [382]
1917–18	360,623,768 [240]	195,231,592 [177]	89,115,333 [55]	10,445,866 [139]	80,236,200 [313]
1918–19	326,645,780 [217]	180,817,744 [164]	43,422,933 [27]	10,445,866 [13]	61,853,000 [241]
1919–20	382,033,694 [254]	208,560,943 [189]	71,801,200 [44]	20,182,400 [26]	118,541,200 [431]
1920–21	287,524,697 [191]	184,770,231 [168]	38,908,800 [24]	1,809,867 [2]	93,680,400 [365]

* The figures for years previous to 1905-06 and also from 1917-18 to 1920-21 relate to the calendar year as it has been found impossible to procure complete data for the official year.

† For calendar year.

‡ In the case of Java the figure for 1905-06 has been taken as 100, earlier figures not being available.

The following statement illustrates the variations in prices of Indian tea sold at auction sales in Calcutta and in average declared values of exports by sea in 1889-90 and the six years ending 1920-21 the average price of 1901-02 to 1910-11 being taken as 100 in each case :—

Year.	Average price of Indian tea.		Average declared value of Exports by Sea.	
	Price.	Variation.	Price	Variation.
	As. p		As p	
1889-90	7 7	126	8 2	117
1915-16	8 11	149	9 5	135
1916-17	8 8	144	9 2	131
1917-18	7 3	121	7 10	112
1918-19	8 0	133	8 9	125
1919-20 . . .	8 0	133	8 8	124
1920-21	5 1	85	6 10	98

The following table shows the quantity of tea, green and black, produced, exported available for consumption in India during the years 1916-17 to 1920-21 (the figures in the last column being calculated after adding stocks left from previous year and left at end of year) :—

	Production.	Net exports.	Available balance
	lbs.	lbs.	lbs.
1916-17	370,313,559	283,345,512	38,968,047
1917-18	371,296,338	346,676,007	42,120,331
1918-19	380,458,975	312,017,339	50,441,636
1919 20	377,055,639	370,372,501	29,807,138
1920-21	345,339,576	276,510,111	43,958,465

Note —The stocks at the end of 1916-17, 1917-18 and 1918-19 were abnormally high owing to lack of freight.

Quantity of Indian Tea exported by sea* (distinguished according to countries of final destination) and by land, in the years 1916-17 to 1920-21.

	1916-17.	1917-18.	1918-19.	1919-20	1920-21.
	lbs.	lbs.	lbs.	lbs	lbs.
United Kingdom	224,927,894	266,963,516	282,205,196	336,916,942	249,111,440
Rest of Europe . ..	27,726,612	9,150,365	1,801,569	1,747,449	191,714
Africa	2,303,863	11,442,137	3,399,875	3,113,264	2,808,314
Canada	8,443,092	21,152,917	926,472	8,299,579	7,995,940
U. S. A.	3,031,648	20,665,481	1,851,289	6,594,383	3,146,515
Rest of America	1,741,618	2,100,414	4,842,875	3,726,280	2,107,815
Ceylon (*a*) .. .	3,647,157	4,484,234	1,283,086	1,720,735	3,274,846
China	9,304,738	3,244,682	620,990	161,356	29,610
Persia	1,262,899	3,486,360	8,358,109	1,959,402	2,050,955
Turkey, Asiatic .. .	1,482,977	1,976,540	7,985,443	4,645,806	5,445,880
Rest of Asia . ..	2,316,185	3,749,376	2,990,825	2,528,226	2,967,537
Australasia .. .	5,160,399	10,776,375	7,397,491	7,782,976	6,521,278
By Land	1,154,944	1,439,536	2,982,560	2,837,296	1,772,848
GRAND TOTAL ..	292,594,026	360,631,933	326,645,780	382,033,694	287,524,697

* Including shipments from the State of Travancore.

(*a*) Tea consigned from British India to Ceylon is almost entirely transhipped at Colombo to other countries and does not, therefore, appear in the Ceylon Customs Returns as imports into Ceylon.

the rainfall and on the prevention of erosion and sudden floods.

(*b*) Forests which afford a supply of valuable timbers for commercial purposes, such, for example, as the teak forests of Burma, the sal forests of Northern, Central, and North-Eastern India, and the deodar and pine forests of the North-Western Himalaya.

(*c*) Minor forests, containing somewhat inferior kinds of timber, and managed for the production of wood, fodder, grazing and other produce for local consumption; these forests are of great importance in agricultural districts.

(*d*) Pasture lands.—These are not "forests" in the generally understood sense of the term, but grazing grounds managed by the Forest Department merely as a matter of convenience.

These four classes of forest are not always sharply divided from each other, and one and the same tract may to a certain extent be managed with more than one object.

Administration.—The forest business of the Government of India is carried out in the Department of Revenue and Agriculture. The Inspector-General of Forests is the head of the Forest Department and is the technical adviser to the Government of India in forest matters.

Territorial charges.—The various provinces are divided into one or more Forest Circles, each in charge of a Conservator of Forests; provinces containing three or more circles also have a Chief Conservator who is the head of the Department for his province. Circles are divided into a number of Forest Divisions, in charge of members of the Imperial or Provincial Forest Service, these Divisions in most cases correspond to civil districts. Each Division contains a number of Ranges in charge of junior members of the Provincial Service or of Forest Rangers or Deputy Rangers; heavy Divisions are also sometimes divided into Subdivisions. The Ranges are further subdivided into a number of beats or protective charges held by Forest Guards or in some cases by Foresters.

Non-territorial charges.—Apart from territorial charges there are various important posts of a non-territorial nature connected with Forest Research and Education, the preparation of Forest Working Plans, and other special duties. Among special posts may be mentioned that of Assistant Inspector-General of Forests, who in addition to Secretariat work, helps the Inspector-General of Forests in the scrutiny of working plans referred to in section 6.

The Forest Service.—The Forest Service comprises three branches:—

(1) The Imperial Service with a total personnel of 257 officers, consisting of the Inspector-General of Forests, Chief Conservators, Conservators, Deputy and Assistant Conservators. The Officers of this service are recruited in the United Kingdom, the present system of recruitment being by selection subject to the possession of an honours degree in some branch of Natural Science of an English, Welsh or Irish University, or of the B.Sc. degree in Pure Science of a Scottish University. Probationers are at present trained at a University possessing a forest school approved by the Secretary of State (Oxford, Cambridge and Edinburgh at present), this training being supplemented by a practical course, partly on the continent of Europe. A Forest Engineering branch has lately been added to the service.

(2) The Provincial Service with a total personnel of 260 officers, consisting of Extra Deputy and Extra Assistant Conservators. Officers for this service are recruited in India and trained at the Forest Research Institute, Dehra Dun, though a certain number of posts in this service are filled by the promotion of specially promising Rangers.

(3) The Subordinate Service, consisting of Forest Rangers (about 840), Deputy Rangers (about 900), Foresters (about 2,000) and Forest Guards (about 11,500). The Rangers are at present trained at three different centres—the Forest College at Dehra Dun (for provinces other than Burma, the Central Provinces and Madras), the Burma Forest School at Pyinmana (for Burma), and the Madras Forest College at Coimbatore (for Madras and the Central Provinces). These three institutions were established in 1878, 1898 and 1912 respectively. A scheme is now under consideration for the further decentralization of the training of Rangers, and it is probable that before long the number of training centres will be increased. The training of subordinates below the rank of Ranger is carried out in various local forest schools and training classes.

Research.—For the first fifty years of the existence of the Forest Department in India no attempt was made to organize the conduct of forest research, and thus to co-ordinate and elaborate the scientific knowledge so necessary to successful economic working. A commencement in organized forest research was at last made in 1906 by the establishment, at the instance of Sir Sainthill Eardley-Wilmot, then Inspector-General of Forests, of a Forest Research Institute at Dehra Dun. From that time onwards research work has been prosecuted energetically in spite of deficient accommodation. The Forest Research Institute, which is under the administrative control of the Inspector-General of Forests, is in the charge of a President. There are five main branches of research, namely Sylviculture, Forest Botany, Forest Economic Products, Zoology and Chemistry, each branch being in charge of a research officer. In addition specialists are appointed temporarily when necessary and are attached to the Institute to carry out investigations in subjects of particular economic importance. Thus a cellulose expert has been employed for some time to investigate possible new sources of paper-making materials, of which the forest of India contain abundant supplies, while more recently a tanning expert has been engaged to study the question of tanning materials.

Forest Products.—Forest produce is divided into two main heads—(1) Major produce, that is timber and firewood, and (2) Minor produce, comprising all other products such as bamboos, leaves, fruits, fibres, grass, gums, resins, barks, animal and mineral products, etc.

The average annual volume of timber and fuel and the value of minor produce removed from State forests during the five years, 1914-15 to 1918-19, is given in the following statement:—

Forest produce removed from State forests, average per annum for the period 1914-15 *to* 1918-19.

Agency of exploitation.	Major produce (volume).		Minor produce (value).			
	Timber	Fuel	Bamboos.	Grazing and fodder grass.	Other minor produce.	Total.
	c. ft.	c. ft.	Rs	Rs.	Rs.	Rs.
By Government ..	10,660,692	15,028,883	1,00,688	71,083	10,54,405	12,26,177
By purchasers ..	71 246,722	132,527,173	12,27.589	34,18,802	24,59,188	71,05,579
By free grantees ..	2,115,965	10,020,616	19,574	6,50,537	2,60,518	9,30,629
By right-holders ..	4,074,552	51,928,745	56,949	29,72,455	2,66 112	32,95,516
Total ..	88,097,931	209,505,417	14,04,800	71,12,877	40,40,224	1,25,57,901

Forest Industries.—The important role which the forests of a country play in its general commercial welfare and in providing employment for its population is not always fully recognized. Fifteen years ago it was estimated that in Germany work in the forests provided employment for 1,000,000 persons while 3,000,000 persons, earning £30,000,000 a year, were employed in working up the raw material yielded by the forests It accurate estimates were available for India, they would no doubt show that apart from the jungle population which is directly dependent on the forests and the large numbers of wood-cutters, sawyers, carters, carriers, raftsmen and others working in and near them, employment on an excessive scale is provided to persons engaged in working up the raw products. Among these latter may be mentioned carpenters, wheelwrights, coopers, boat-builders, tanners, rope-makers, lac-manufacturers, basket-makers, and many other classes of skilled labourers. The Indian census of 1911 gave 1,191,367 people and their dependents so employed in British India, and a further 394,097 in Native States, but these are probably below the actuals, as much forest labour is not whole-time labour, devoting seven or eight months in the year to forest work and the rest to agriculture. With the opening up of the forests, the extension of systematic working, the wider use of known products, and the possible discovery of new products, a steady and extensive development of industries dependent on the forests of India may be confidently anticipated in the future.

A detailed consideration of the many important forest industries would fill a large volume; all that can be done here is to review shortly a few of them by way of example.

Pine-resin.—It is now well over a quarter of a century since forest officers in the North West of India began to realize the potentialities of the wide pine belt along the foot hills and lower slopes of the Himalaya. Many of them being French-trained, it was not surprising that the splendidly organized tapping of the maritime pine of the Landes should serve them as a model, and so from the very start the conservative cup and lip method in use in France was adopted, thus ensuring the best possible yield of resin with the minimum risk of injury to the tree. And so from small beginnings in the United Provinces, and later in the Punjab, the industry has grown till now (for the year ending on 31st March 1919) the resin collection in the United Provinces and the Punjab amounts to 125,633 maunds net (4,615 tons), the operations covering 97,525 acres of forest with 2,756,142 blazes or channels in work, giving employment to at least 4,000 operatives.

Paper.—In 1904 there were eight paper mills in British India and Indian States, with an output of 20,100 tons of paper annually, the daily average number of persons employed being 4,266. In 1920, the number of mills had

increased to nine, the output to 29,400 tons, and the average number of operatives employed to 5,759. Of the mills the Titagarh concern, with an output of 17,943 tons, is the largest and probably the best managed. The present demand for paper is supplied by the nine mills referred to, by imports, and to a very small extent by hand-made paper prepared locally.

Turning to the question of paper-pulp, India imported no less than 13,250 tons of pulp in 1912-13, that is in pre-war times, while by 1919-20 the amount had fallen to 9,400 tons owing to the high cost of obtaining the half-stuff and to shipping difficulties. In spite of great difficulties in obtaining chemicals during the war, the Indian mills not only maintained their output but actually increased it, a fact strongly indicating the possibilities of expanding the output in this country, now that more normal conditions prevail.

The most important raw materials used in India at the present day for the production of half-stuff is "sabai," "bhabar" or "baib" grass, *Ischoemum angustifolium*, which is obtained from the forests of Bengal, Chota Nagpur, Orissa, Nepal and the United Provinces. The other materials used in India for the manufacture of paper are rags of poor quality, hemp, jute, gunny bags, waste paper and old ropes. Since the war began, limited quantities of "munj" grass, *Saccharum munja*, have been used, though the yield of pulp from this grass is not high, while in many parts of the country its value is considerable owing to the demand for other purposes.

The two most important substances from which pulp is prepared all over the world are wood and grasses, of which wood claims 90 per cent. of the outturn. In India, owing to the large number of species and the generally mixed character of the forests very few timbers are available which fulfil the necessary conditions to ensure the success of a pulping concern, namely concentrated large supplies coupled with suitability for the manufacture of pulp. The few timbers that meet the above conditions are not available for pulp as the timber is required as timber in the ordinary development of the country.

Under the natural order *Gramineæ* we have bamboos and grasses, both of which are available in large quantities in certain localities of British India, and some of which have, from experiments, given very favourable results. Up to date the best results have been obtained with *Bambusa polymorpha* (kyathaungwa), a species which occurs in great abundance in Burma. *Cephalostachyum pergracile* (tinwa) and *Dendrocalamus strictus* (the common male bamboo) have given almost equally good results, while *Bambusa arundinacea* (the thorny bamboo) and *Melocanna bambusoides* (the single-stemmed bamboo) have given results little inferior to the best as yet obtained. All these species are available in very large quantities and can be extracted at relatively cheap rates. The scheme for making bamboo-pulp has now been taken up by several firms, leases having been granted by the Forest Department in Burma, Chittagong and Bombay, and consequently the manufacture of pulp from bamboo will soon, it is hoped, be an accomplished fact.

The elephant grasses, found in certain localities of India and Burma, afford material nearly as promising for the manufacture of pulp as that yielded by bamboos.

Matches.—India is almost entirely dependent for its supplies of matches on imports from other countries. The bulk of the matches come from Japan, Sweden and Norway, while in pre-war times smaller quantities came from Austria-Hungary, Belgium and Germany. About 20 years ago India made a definite attempt to manufacture its own matches, one of the first factories to be erected on modern lines being that of the Gujrat Islam Manufacturing Co., Ld., at Ahmedabad. At the present time the number of match factories in India has not increased, for although new ones have been established, some of the older and smaller ones have disappeared. While some of the concerns are able to make moderate profits, others are not and, generally speaking, match making in India cannot be said to have emerged from the experimental manufacturing stage, and very close study, expert knowledge and keen business methods will have to be applied before this industry in India can be placed on a satisfactory basis.

The most universally used wood in India for match-making is *Bombax malabaricum*, the "simul" or cotton tree. The timber of this tree makes up into a strong good box of fair appearance. It yields fair sticks, the drawbacks to the timber being that it discolours, that it does not allow of the stick being cut uniformly square in section, and that the waste in conversion is considerable. A far superior stick can be obtained from *Abies pindrow* and *Picea morinda*, the silver fir and spruce respectively. The chief drawback to these species lies in the difficulty of extraction from the high elevations at which they grow in the Himalayas, a difficulty which, however, can probably be overcome by mechanical extraction. Many other species of timber occur which are fairly suitable for match making, amongst which may be mentioned *Anthocephalus cadamba*, *Bombax insigne Boswellia serrata*, *Evodia fraxinifolia*, *Givotia rottleriformis*, *Populus euphratica* and *Trewia nudiflora*.

Antiseptic Treatment.—The idea of protecting timber by artificial means is a very old one. The use of paints and tars was well known to the Romans, while that of charring and smoking timber, to protect it from decay, dates back to the later Egyptian period. It was not, however, until modern times that it became possible, with the help of science and machinery, to treat timber so as to give it thorough protection against decay and insect attack.

The primary factor governing the treatment of timber in any country is the procurability of a good grade of cheap coal-tar creosote. This oil is not at present available in large quantities in India, most of the supplies having to be imported.

Financial Results.—The steady growth of forest revenue, expenditure and surplus during the past 50 years is shown in the following statement, which gives annual averages for quinquennial periods:—

Financial Results of Forest Administration in British India from 1864-65 *to* 1918-19 *(in lakhs of rupees).*

Quinquennial period.	Gross revenue (average per annum).	(Expenditure average per annum)	Surplus (average per annum).	Percentage of surplus to gross revenue.
	Lakhs.	Lakhs.	Lakhs.	Lakhs.
1864-65 to 1868-69	37·1	23·8	13·6	36·4
1869-70 to 1873-74	56·3	39·3	17·0	30·2
1874-75 to 1878-79	66·6	45·8	20·8	31·2
1879-80 to 1883-84	88·2	56·1	32·1	36·4
1884-85 to 1888-89	116·7	74·3	42·4	36·3
1889-90 to 1893-94	159·5	86·0	73·5	46·1
1894-95 to 1898-99	177·2	98·0	79·2	44·7
1899-1900 to 1903-04	196·6	112·7	83·9	42·7
1904-05 to 1908-09	257·0	141·0	116·0	45·1
1909-10 to 1913-14	296·0	163·7	132·3	44·7
1914-15 to 1918-19	371·3	211·1	160·2	43·1

Prospects.—The past work of the Forest Department has already borne fruit, not only in a steady rise of revenue but also in the improved condition of the forests resulting from careful protection and tending. Much has been done in the way of opening up the forests to regular exploitation; but there is still room for enormous development in this respect, for there are extensive areas of valuable forest as yet almost untouched, and these represent a vast capital locked up and not only lying idle but even deteriorating. Perhaps the two most pressing needs at present are the introduction of improved sylvicultural systems and the extension of roads and other export works to facilitate and cheapen extraction. These two must proceed simultaneously, since they are inter-dependent, for it is obvious that timber and other produce can be extracted far more economically if it is available in large quantities within a limited radius than if it is scattered in small quantities over large tracts of country; indeed this question must often decide whether extraction is possible or not. Sylviculture teaches us how to effect this concentration and is therefore the bed-rock on which future results, financial and otherwise, must rest; it is of little avail to seek and develop new markets for timbers and other products if these cannot be produced in regular and sufficient quantities and extracted at a reasonable cost.

Bibliography.—Quinquennial Review of Forest Administration in British India for the period 1914-15 to 1918-19. (Simla: Government Press). A large number of bulletins and other publications has been issued by the Forest Research Institute, and of these a list can be obtained from the Superintendent, Government Printing, India, Calcutta.

AREA of FOREST LANDS, OUTTURN of PRODUCE, and REVENUE and EXPENDITURE of FOREST DEPARTMENT.

Province.	Area of Province	Forest Area.				Percentage of Forests to whole Area of Province	Outturn of Produce.		Revenue.	Expenditure.	Surplus.
		Reserved Forests.	Protected Forests.	Unclassed State Forests, &c.	Total.		Timber and Fuel.	Minor Produce.			
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Per cent.	Cub. ft.	Rs.	Rs.	Rs.	Rs.
Imperial	..	..	..	..	..	..	..	..	*36,571	†4,67,796	4,31,225
Bengal	78,836	4,888	1,711	4,030	10,629	13·5	21,817,000	4,06,143	19,44,104	8,25,835	11,18,269
United Provinces	106,725	6,311	1,101	61	7,473	7·0	32,894,000	23,10,641	66,37,166	45,98,963	20,38,203
Punjab	96,650	2,109	4,169	767	7,045	7·3	34,401,000	25,16,879	21,54,178	17,95,804	3,58,374
Burma (including Shan States)	226,911	29,336	..	1,16,829	146,165	64·4	100,775,000	9,57,177	1,25,28,852	56,91,982	68,36,870
Bihar and Orissa ..	82,484	1,747	1,089	..	2,836	3·4	20,326,000	2,55,586	9,44,763	4,20,849	5,13,914
Assam	48,954	5,495	..	16,309	21,804	44·5	13,445,000	12,48,952	14,92,718	6,90,961	8,01,757
Central Provinces and Berar	99,948	19,645	..	..	19,645	19·7	34,867,000	22,71,835	34,88,422	20,15,548	14,72,874
Coorg	1,582	520	..	..	520	32·9	649,576	23,419	5,77,873	4,25,572	2,52,301
North-West Frontier Province	13,184	236	..	..	236	1·8	3,069,000	30,887	3,81,322	2,07,357	1,73,965
Ajmer-Merwara ..	2,767	142	..	..	142	5·1	158,994	67,745	37,280	28,508	8,772
Baluchistan	54,228	313	..	472	785	1·4	254,348	46,356	25,108	28,787	—3,679
Andamans ..	3,143	85	..	2,122	2,207	70·2	1,802,000	2,792	11,84,383	6,12,826	5,71,557
Madras ..	142,218	18,712	..	682	19,394	13·6	22,504,000	24,08,465	47,91,460	31,82,520	16,08,940
Bombay ..	123,164	12,100	487	..	12,587	10·2	56,888,000	16,57,711	1,04,94,031	28,72,197	26,21,834
Total 1918-19 ..	1,080,794	101,639	8,557	141,272	251,468	23·3	343,850,918	1,42,04,588	4,68,18,231	2,38,75,505	1,79,42,726
1917-18 ..	1,080,650	101,233	8,752	141 527	251,512	23 3	328,666,279	1,56,75,668	4,09,69,257	2,11,57,063	1,98,12,194
1916-17 ..	1,078,585	100,308	9,140	137,131	246,579	2·9	306,869,398	1,24,56,596	3,70,61,930	1,87,43,883	1,83,18,047
1915-16 ..	1,079,481	99,205	9,712	140,083	249,000	23·100	280,216,111	1,16,80,737	3,11,16,367	1,85,92,607	1,25,23,760
1914-15 ..	1,079,149	97,580	10,405	141,882	249,867	23·15	270,455,459	1,07,63,283	2,97,09,784	1,81,06,450	1,15,03,334
1913-14 ..	1,079,638	96,297	8,390	140,925	245,612	22·7	294,613,323	1,07,98,905	3,33,01,545	1,75,43,455	1,57,58,090
Totals. 1912-13 ..	1,079,164	96,867	8,492	133,564	238,923	22·1	290,718,866	7,38,978	3,22,09,809	1,72,07,810	1,50,01,999
1911-12 ..	1,071,051	96,148	8,406	138,516	242,960	22·7	257,194,423	7,08,982	2,90,57,359	1,69,46,568	1,21,10,793
1910-11 ..	1,071,010	96,387	8,507	138,584	243,478	22·7	260,583,175	6,35,188	2,74,05,454	1,52,44,023	1,21,61,431
1909-10 ..	1,042,718	96,474	8,814	140.263	245,551	23·5	241,132,930	5,54,096	2,60,25,794	1,49,20,654	1,11,05,140
1908-9 ..	1,040,872	94,561	8,835	138,378	241,774	23·2	232,035,865	5,26,669	2,54,56,799	1,47,26,034	1,07,30,765
1907-8 ..	1,040,666	94,059	8,853	134,897	237,809	22·8	234,982,123	5,51,144	2,58,62,979	1,45,12,933	1,13,50,046

* Includes Rs. 9,083, being the receipt from Imperial and Imperial Forest College and Research Institute.

† Includes Rs. 3,57,158, being the expenditure incurred on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.

RUBBER CULTIVATION.

The most important rubber-yielding tree found growing naturally in the Forests of India is *Ficus elastica*, a very large tree of the outer Himalayas from Nepal eastwards, in Assam, the Khasia Hills and Upper Burma. It has also been cultivated in Assam in the Chardúar plantation in the Tezpur Sub-Division, as also in the Kulsi plantation of the Gauhati Sub-Division in the Kamrup Division. There are also a number of other rubber-yielding trees found in the Indian and Burman forests from which rubber can be collected on terms quoted by Government. Attempts have been made to cultivate Para, Ceara and Castilloa in various parts of India and Burma. In India proper the chief attempts were made on the west coast, about 180 acres being planted from 1908 onward at Gersoppa. Similar attempts have been made in Madras: but at present Para rubber is being grown as a commercial product rather in Burma than the rest of India.

The **production of rubber in India** is confined to Assam, Burma, and the Madras Presidency.—

	Acres.	No. of trees.
Assam	4,681	137,430
Madras	12,022	1,636,476
Burma	29,544	4,911,399
Total ..	46,247	6,685,305

The yield of Assam plantations is relatively small and the number of trees to the acre is much less than in Madras and Burma. The outturn of Madras in 1913 was more than double that of Burma, where most of the trees being less than six years old are not yet productive. All planting is stump planting about 9 to 12 months old. The trees can be tapped in four years from the date of planting. The average yield in Burma from 4 to 6 years old trees is 1½ to 3 lbs. per tree per year. The capital invested is from £22 to £25 per acre. The average cost of production is about 1*s.* 6*d.* to 1*s.* 10½*d* per lb. The Government of India has now decided to collect annual statistics relating to the production of rubber.

There has been a steady development in the **exports of rubber** from India. There was in 1920-21 a record export of 14 million lbs. of rubber which was 11 per cent above last year's although the demand created by the war had fallen off. This was chiefly due to the increased area tapped, namely 69,000 acres which was estimated to yield nearly 14 million lbs. The value fell by 8 per cent to Rs. 155 lakhs owing to the slump in the rubber market. The United Kingdom absorbed 76 per cent, Ceylon 12 per cent and the United States of America 10 per cent. Madras had nearly 70 per cent of the trade and Burma 30 per cent. During the year no royalty was levied on exports. The report of the Industrial Commission points out that **rubber manufacture** has not been started in India. "This industry", it adds, "is one of those that are essential in the national interest and should be inaugurated, if necessary, by special measures."

Bibliography.—For fuller details see "Dictionary of the Economic Products of India" and the abridged edition of the same published in 1908 under the title "The Commercial products of India" by Sir George Watts; and the "Commercial Guide to the Forest Economic Products of India" by R. S. Pearson, published by the Government Press, Calcutta, 1912.

MATCH FACTORIES.

Imports of matches in 1920-21 fell off from 15 to less than 12½ million gross in quantity and from Rs. 2,05 to Rs. 1,67 lakhs in value. Japan still holds the first place with Rs. 1,29½ lakhs as compared with less than Rs. 35 lakhs from Sweden.

In normal years matches are also imported from Austria-Hungary, Germany and Belgium. In the opinion of the Forest experts at Dehra Dun there is an abundance of raw material in this country for match manufacture.

Indian timbers for matches.—In an article on the Indian match industry which appeared in the *Indian Agriculturist* the woods of the following species are said to be employed in Burma for match splints: *Bombax insigne, B. malabaricum* (simul), *Anthocephalus Cadamba* (kadam), *Sarcocephalus cordatus, Spondias mangifera* (amra), and *Engelhardtia spicata* (palash). These woods are not the best for the purpose, but are those most easily procurable. There are other kinds of white wood, such as poplar, pine, willow, and alder, in abundant quantities, but they are difficult to extract and transport and are therefore costly.

The attempts to manufacture matches in India have not hitherto been attended with great success, but recently two well-equipped factories have been started in Burma which give promise of good results. One of these is in Rangoon and is owned by Chinese; the other is at Mandalay, and is under European management. Further investigations are said to be necessary in order to settle the question as to the most suitable woods to employ, and when these have been brought to a satisfactory conclusion it is thought that Burma will be able to produce matches of first-class quality. It may be added that in 1912, the latest year for which complete statistics are available, there were six match factories in India.

The **Law in India** prohibiting the importation of the old sulphur matches as from July 1st, 1913, has not seriously affected the position of the Swedish manufacturers, as they were able to supply another "strike-anywhere" match to take the place of the kind then prohibited, but as the new kind is dearer to manufacture the prices have gone up, and are likely to rise still further.

PAPER MAKING.

This industry before the war did not make the headway in India that had been anticipated, there being only 11 mills at work now with an authorised capital of Rs. 49½ lakhs, from which the output in 1916-17 was 31,900 tons compared with 26,450 tons, the pre-war quinquennial average. Further increases in outturn are hampered by the inability to secure new machinery and the irregular arrivals of chemicals of which the cost continues steadily to rise.

Imports of paper and pasteboard increased materially in quantities and very materially in value in 1920-21. So far as printing paper is concerned, imports before the war had averaged about 16,000 tons annually; imports during the war averaged only 13,500 tons and obviously stocks had to be replenished. The imports in 1918-19 were 9,700 tons and in 1919-20 10,000; during the year under review the quantity rose to nearly 28,000 tons. With regard to values there was actually a decline from Rs. 90½ lakhs in 1918-19 to Rs. 63½ lakhs in 1919-20, the fall being due chiefly to high exchange. Falling exchange and high prices as well as heavier imports account for the big increase to Rs. 2,85 lakhs in 1920-21. Similarly the declared value of imported writing paper and envelopes increased from Rs. 45 lakhs in 1919-20 to Rs. 2,03½ lakhs in 1920-21. Paper manufactures increased from Rs 21 lakhs to Rs. 40½ lakhs; other kinds of paper from Rs 75 to Rs. 1,55 lakhs; pasteboard, millboard and cardboard from Rs. 30 to Rs. 46 lakhs. The total trade in paper and pasteboard declined from Rs. 2¾ crores in 1918-19 to less than Rs. 2¼ crores in 1919-20 but increased to over Rs. 7¼ crores in 1920-21. Imports of paper and pasteboard on Government account declined from Rs. 13 lakhs in 1919-20 to nearly 10¾ lakhs in 1920-21 indicating possibly a smaller consumption. The production of the Indian paper mills in 1920 amounted to 29,400 tons as compared with 31,000 in 1919 and 31,400 in 1918.

There are five large paper mills in the country working on up-to-date Western lines, *viz.*, at Titagarh, Kankinara and Raniganj in Bengal, the Upper India Couper Mills at Lucknow and the Reay Mill at Poona. There are also two smaller mills at Bombay and Surat which make only country paper, and there are one or two other mills which recently were not working. The five large mills have a large Government connection, as the greater part of Government orders for paper is placed in India.

The existence of the local industry depends chiefly on the supply of Sabai grass which on account of unfavourable seasons sometimes yields short crops. It is of great importance, therefore, to look for materials affording a constant outturn, and various reports have been published on the available paper-making materials. Considerable attention has been devoted to **Bamboo**, since 1875 when it was found that this plant—of which there are four chief varieties in India—yielded a fibrous paper stock which made a quality of paper superior to esparto grass and at a considerably less cost. It was at that time estimated that one acre of bamboo would yield 10 tons of dried stems equivalent to 6 tons of merchantable cellulose. In 1905 Mr. R. W. Sindall was invited by Government to visit Burma with a view of enquiring into the possibility of manufacturing paper pulp. His report on the subject appeared in March 1906. He made numerous experiments with bamboo and woods of Burma and laid down lines along which further enquiry should be made. Subsequently Mr. W. Raitt, a pulp expert, was engaged at the Forest Research Institute in conducting tests on the treatment of bamboos by the soda and sulphate processes, the treatment of bamboo before boiling, with remarks on the utilisation of nodes and internodes. His results were embodied in the "Report on the investigation of Bamboo or Production of Paper-pulp," published in 1911 Mr. R. S. Pearson of the Forest Service, Dehra Dun, as the outcome of enquiries made throughout India published in 1912 a note on the Utilization of Bamboo for the manufacture of Paper-pulp. The yield per acre from bamboo is larger than that of grasses usually used for paper. The cost of working into pulp has been estimated to yield a product cheaper than imported unbleached spruce sulphite and unbleached sabai grass pulp. In 1915 Mr. Dhruva Sumanas published a pamphlet, Dendrocalamus Strictus Bamboo of the Dangs, as the result of investigations carried on in Bansda State.

In a paper read before the Royal Society of Arts in 1921 Mr. Raitt gave an answer to the question. "*What India can do* to fill the gap in the world's shortage of paper?" He said that he thought it was "a modest estimate to say that from bamboo, taking only that which is available under 'possible' manufacturing conditions, Burma, Bengal and South West India could produce ten million tons of pulp per annum, and Assam from Savannah grasses three million. India could therefore produce pulp for the whole world."

The leading Indian **paper grass** for the last thirty years has been the bhaib, bhabar, or sabai grass of Northern India. It is a perennial grass plentiful in drier tracts from Chota Nagpur and Rajmahal to Nepal and Garhwal. The Calcutta mills draw their supplies from Sahibganj, Chota Nagpur and the Nepal Terai. The quantity annually exported from Sahibganj is between three to four lakhs of maunds. The cutting in these districts is said to commence in October when the plants are six or seven feet high. Sabai grass yields from 36·6 to 45·5 per cent. of bleached cellulose. A report by Mr. R. S. Pearson, Forest Economist, Dehra Dun, on the use of **elephant grasses** in Assam was issued in 1919. The most important species of grass found in the areas in which investigation has been made are Khagra (*Saccharum spontaneum*) and Batta (*Saccharum narenga*), with patches of Nal (*Phragmites karka*) on the more swampy ground. Hand samples of the above grasses were sent to England to be tested on a laboratory scale, while several tons were sent to an Indian paper mill to be made into paper. The results were satisfactory and proved that a very fair quality of paper can be produced from these grasses at a relatively low price. Small samples of such paper can be obtained by persons interested in these grasses from the Forest Economist, Forest Research Institute, Dehra Dun, who can also supply further details.

Mines and Minerals.

Total value of Minerals for which returns of Production are available for the years 1919 and 1920.

——	1919.	1920	Increase	Decrease.	Variation per cent.
	£	£	£	£	
Coal	10,119,256	9,381,164	.	738,092	− 7·3
Petroleum	8,340,894	7,954,632	.	386,262	− 4·6
Manganese (*a*)	1,546,330	3,823,095	2,277,365		+147·3
Gold	2,256,039	2,783,915	527,876	..	+28·4
Salt	1,823,522	1,446,409	.	377,113	− 20·7
Mica (*a*) . . .	863,448	1,065,438	201,990	.	+23·4
Lead and Lead-ore ..	668,642	975,927	307,285	.	+45·9
Silver	487,246	843,109	355,863	.	+73·8
Saltpetre .. .	471,247	540,012	68,765	.	+14·6
Building materials ..	436,183	454,750	18,567	.	+4·2
Tin and Tin-ore including low grade tin-ore.	251,740	325,626	73,886	.	+29·3
Tungsten	521,194	139,707	.	381,487	− 73·2
Jadeite (*a*)	87,103	120,380	33,277	..	+38·2
Chromite	88,724	79,970	..	8,754	− 9·9
Iron-ore	45,887	67,743	21,856	.	+47·6
Ruby, Saphire and Spinel	108,087	61,982	..	46,105	− 42·7
Monazite	60,712	49,231	..	11,481	− 18·9
Clay	49,960	40,812	..	9,148	− 18·3
Magnesite ..	19,728	17,216	.	2,512	−12·7
Steatite	6,498	10,585	4,087	..	+62·9
Alum	4,800	7,320	2,520	..	+52·5
Asbestos	1,656	7,272	5,616	.	+339·1
Ochre	3,600	(*b*) 5,356	1,756		+48·8
Bauxite	1,934	4,128	2,194	.	+113
Diamonds	20,825	4,125	.	16,700	+80·2
Gypsum	2,869	3,693	824	.	+28·7
Amber	616	1,666	1,050	..	+170·5
Barytes	1,561	1,553	.	8	—·5
Aquamarine and beryl ..		1,225	1,225	..	..
Corundam	5,347	575	.	4,772	—89·2
Graphite	819	560	.	259	—31·6
Antimony	203	40	..	163	—86·3
Potash	42	25	.	17	—40·5
Molybdenite	101	19	..	82	—81·2
Samarskite .. .	10	12	2	..	+20
Total ..	28,296,823	30,219,772	3,905,904	1,932,955	+6·8
			+1,922,949		

(*a*) Export values.
(*b*) Includes the value of ochre produced in the Panna and Baramuda States.
1 The increases or decreases are shown in sterling values, taking the rupee at 2*s*. (The true average for 1919, was 1*s*. 8$\frac{11}{16}$*d*., and for 1920, 2*s*. 016*d*.)

The feature which stands out most prominently in a survey of the mineral industries of India is the fact that until recent years little has been done to develop those minerals which are essential to modern metallurgical and chemical industries, while most striking progress has been made in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may conveniently be called direct processes. In this respect India of to-day stands in contrast to the India of a century ago. The European chemist armed with cheap supplies of sulphuric acid and alkali, and aided by low sea freights and increased facilities for internal distribution by the spreading network of railways has been enabled to stamp out, in all but remote localities, the once flourishing native manufactures of alum, the various alkaline compounds, blue vitriol, copperas, copper, lead, steel and iron, and seriously to curtail the export trade in nitre and borax. The reaction against that invasion is of recent date. The high quality of the native-made iron, the early anticipation of the processes now employed in Europe for the manufacture of high-class steels, and the artistic products in copper and brass gave the country a prominent position in the ancient metallurgical world, while as a chief source of nitre India held a position of peculiar political importance until, less than forty years ago, the chemical manufacturer of Europe found among his by-products, cheaper and more effective compounds for the manufacture of explosives.

With the spread of railways, the development of manufactures connected with jute, cotton and paper, and the gradually extended use of electricity the demand for metallurgical and chemical products in India has steadily grown. Before long the stage must be reached at which the variety and quantity of products required, but now imported, will satisfy the conditions necessary for the local production of those which can be economically manufactured only for the supply of groups of industries.

Coal.

Most of the coal raised in India comes from the Bengal—Gondwana coal-fields. Outside Bengal the most important mines are those at Singareni in Hyderabad, but there are a number of smaller mines which have been worked at one time or another.

Provincial production of coal during the years 1919 and 1920.

Province.	1919.	1920.
	Tons.	Tons
Assam	291,734	325,535
Baluchistan .	34,328	33,941
Bengal	5,777,632	4,207,452
Bihar and Orissa ..	15,119,812	11,975,656
Burma	1,500	....
Central India . ..	182,141	158,051
Central Provinces ..	497,021	491,205
Hyderabad . ..	662,196	694,080
North-West Frontier Province .	20	..
Punjab . .	46,893	58,078
Rajputana	14,760	18,216
Total ..	22,628,037	17,962 214

Output in 1920—There was a decrease of over 4½ million tons, or over 20 per cent, in the output of coal This decrease was due largely to Bengal and Bihar and Orissa; Assam shewed a distinct increase There was a general increase in the pit's mouth value everywhere, except in Assam, in the fields of Bengal the rate of increase was as much as Re 1-5-4, in Bihar and Orissa it was As 8. The recent discovery of two unexposed seams of good steam coal in the Talchir coalfield, the possibility of which was foreseen by Blanford in 1872, may do something to alleviate the present congestion of coal transport.

Price—Average Price (per ton) of Coal extracted from the Mines in each province during the year 1920

	Average price per ton.
	Rs a. p
Assam	7 7 9
Baluchistan	16 9 9
Bengal	6 5 5
Bihar and Orissa .. .	4 9 2
Central India ..	4 4 10
Central Provinces .	5 13 3
Punjab .. .	12 3 10
Rajputana	7 7 1

Origin—of Indian Coal raised during 1919 and 1920.

	Average of last five years	1919.	1920.
	Tons	Tons.	Tons
Gondwana coalfields	18,782,584	22,238,802	17,526,444
Tertiary coalfields	401,754	389,235	435,770
Total . ..		22,628,037	17,062,214

Employees.—The average number of persons employed daily in the coal-fields decreased by 13,410, or about six and a half per cent. The average output per person employed was less than in the preceding year, namely 94·37 tons, as against 111·05. The total number of fatal accidents was 189, corresponding to a death rate of ·99 per thousand persons employed, which compares favourably with 287 fatal accidents and a death rate of 1·11 per thousand in 1919. The average number of persons employed daily in 1919 was 203,752 and in 1920 190,342.

IRON ORE.

Bengal and Bihar and Orissa are the only provinces in India in which iron ore is mined for smelting by European methods. Iron smelting, however, was at one time a widespread industry in India and there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps are not found. The primitive iron smelter finds no difficulty in obtaining sufficient supplies of ore from deposits that no European ironmaster would regard as worth his serious consideration Early attempts to introduce European processes for the manufacture of pig-iron and steel were recorded in 1830 in the South Arcot District. Since that date various other attempts have been made but none proved a success before that now in operation near Barakar in Bengal The site of the **Barakar Iron-Works** was originally chosen on account of the proximity of both coal and ore supplies. The outcrop of iron stone shales between the coal-bearing Barakar and Raniganj stages stretches east and west from the works, and for many years the clay ironstone nodules obtainable from this formation formed the only supply of ore used in the blast furnaces. Recently magnetite and hematite have been obtained from the Manbhum and Singhbhum districts, and the production from the last named district has largely replaced the supplies of ore hitherto obtained near the iron-works. The Bengal Iron and Steel Company, Limited, have now given up the use of ores obtained from the neighbourhood of Barakar and Raniganj and are now obtaining most of their ores from the Kolhan Estate, Singhbhum. Some years ago the Bengal Iron Steel Co., Ltd., secured two deposits of iron-ore in Saranda (Singhbhum) forming parts of two large hill masses known as Notu Buru and Buda Buru respectively. Recent prospecting in this part of Singhbhum has led to the discovery of numerous additional deposits of iron-ore, the extension of which has been traced into Keonjhar and Bonai States in Orissa, a total distance of some 40 miles in a S. S. W. direction At Pansira Buru, a portion of Notu Buru, the deposit has been opened up, and now feeds the Barakar ironwork. Pansira Buru rises to over 2,500 feet above sea level, the low ground on the west side being at about 1,100 feet above sea-level. The uppermost 400 to 450 feet of this hill has now been opened up, and the workings indicate the existence of a deposit about a quarter of a mile long, perhaps 400 feet thick and proved on the dip for about 500 feet. The ore body appears to be interbedded with the Dharwar slates, from which it is separated by banded hematite-jaspers. The ore itself is high-grade micaceous hematite, often lateritised at the outcrop. Cross-cuts into the interior of the deposit show that the hematite becomes very friable not far below the outcrop. In fact the characteristics of this ore, including the surface lateritisation, are almost exactly reproduced in the iron-ore deposits of Goa and Ratnagiri. **The Tata Iron and Steel Company** at Sakchi possesses slightly richer and purer ore-bodies in the Raipur district, supplies of ore are at present drawn from the deposits in Mayurbhanj The ore-deposits have all been found to take the form of roughly lenticular leads or bodies of hematite, with small proportions of magnetite, in close association with granite on the one hand and granulitic rocks on the other. These latter have been noted in the field as charnockites, the term being employed, rather loosely no doubt, but probably in the main correctly, to cover types of pretty widely varying acidity. In still more intimate association with the ores than either of the foregoing were found masses of dense quartz rocks, frequently banded, and banded quartz-iron-ore rocks. These last are of the types so commonly associated with Indian iron-ores, but are here not so prominent as is usually the case

Output - There was a slight decrease in the output of iron ore in 1920. The Tata Iron and Steel Co. produced 221,606 tons of pig iron and 113,222 tons of steel, including rails, and 1,183 tons of ferro-manganese The Bengal Iron and Steel Co produced 89,650 tons of pig iron and 31,775 tons of iron castings In the Central Provinces the number of indigenous furnaces rose from 159 to 225. The Burma Corporation are extracting limonite near Maymyo for use as flux in lead smelting

MANGANESE ORE.

This industry commenced some twenty years ago by quarrying the deposits of the Vizagapatam district, and from an output of 674 tons in 1892, the production rose rapidly to 92,008 tons in 1900 when the richer deposits in the Central Provinces were also attacked, and are now yielding a larger quantity of ore than the Vizagapatam mines. India now alternates with Russia as the first manganese-producing country in the world. The most important deposits occur in the Central Provinces, Madras, Central India, and Mysore—the largest supply coming from the Central Provinces. The uses to which the ore is put are somewhat varied. The peroxide is used by glass manufacturers to destroy the green colour in glass making, and it is also used in porcelain painting and glazing for the brown colour which it yields. The ore is now used in the manufacture of ferromanganese for use in steel manufacture. Since 1904, when the total output was 150,190 tons, the progress of the industry has been remarkable owing to the high prices prevailing. In 1905 production reached 247,427 tons; the following year it was more than doubled (571,495 tons), and in 1907 the figures again rose to 902,291 tons In 1909, on account of the fall in prices the out-

put contracted to 642,675 tons, but it almost regained its former position in 1910 when the production rose to 800,907 tons. In 1911 it fell to 670,290 tons. In 1916 the output was 645,204 tons valued F.O.B. at Indian Ports at £1,487,026. The ore raised in the Central Provinces is of a very high grade, ranging from 50 to 54 per cent. of the metal, and in consequence of its high quality is able to pay the heavy tax of freight over 500 miles of railway, besides the shipment charges to Europe and America, for the whole of the ore is exported to be used principally in steel manufacture in the United Kingdom, Germany, and the United States.

Manganese was one of the minerals which were largely affected by the war, the exports being restricted almost entirely to consignments to the United Kingdom, with a comparatively small quantity to the United States; the quantity produced in 1920 amounted to 736,439 tons, as compared with 537,995 tons in the previous year. In 1920-21 exports of manganese ore increased to 780,000 tons from 382,000 in the preceding year. The bulk went to the United Kingdom, Belgium and America where stocks had been allowed to run short.

GOLD.

The greater part of the total output of gold in India is derived from the Kolar gold field in Mysore. During the last decade the production of this mine reached its highest point in 1905 when 616,758 ounces were raised. In 1906 the quantity won was 565,208 ounces and this figure fell to 535,085 ounces in 1907. The figures for the latter years reveal a small improvement. The Nizam's mine at Hutti in Hyderabad comes next, but at a respectable distance, to the Kolar gold field. This mine was opened in 1903. The only other mines from which gold was raised were those in the Dharwar district of Bombay and the Anantapur district of Madras. The Dharwar mines gave an output of 2,993 ounces in 1911 but work there ceased in 1912. The Anantapur mines gave their first output of gold during the year 1910, the amount being 2,532 ounces, valued at Rs. 1,51,800. Gold mining was carried on in the North Arcot district of Madras from 1893 till 1900, the highest yield (2,854 ounces) being obtained in the year 1898. The Kyankpazat mine in Upper Burma was worked until 1903, when the pay chute was lost and the mine closed down. In 1902 dredging operations were started on the Irrawaddy river near Myitkyina, and 216 ounces of gold were obtained in 1904; the amount steadily increased from year to year and reached 8,445 ounces in 1909, but fell to 5,972 ounces in 1910 increasing again to 6,390 ounces in 1911 and being in 1913, only 5,393 ounces. The gold craze, which was prevalent in Rangoon a few years ago, has disappeared as suddenly as it sprang up. The Burma Gold Dredging Company holds a right to dredge for gold in the bed of the Irrawaddy river and notwithstanding the obstacles encountered from time to time in the shape of floods, etc., the company has so far been fairly successful in its operations. The small quantity of gold produced in the Punjab, the Central Provinces, and the United Provinces is obtained by washing. Gold washing is carried on in a great many districts in India, but there is no complete record of the amount obtained in this way. The average earnings of the workers are very small, and the gold thus won is used locally for making jewellery.

There was again a decrease, amounting to 8,193 ozs. in the output of gold; the decrease in the previous year was 28,853 ozs. The output in the Mysore fields fell by 12,290 ozs., but a portion of this was compensated by the rise in production of Hyderabad and Madras. The Dalbhoom Gold and Minerals Prospecting Co., Ld., and the Hutti (Nizam's) Gold Mines, Ld., have ceased operations in Singhbhum and Hyderabad respectively. The Nundydroog Co., Ld., was reconstructed during the year.

Quantity and Value of Gold produced in India during 1919 and 1920.

	1919		1920		Labour.
	Quantity	Value	Quantity	Value.	
	Ozs.	Rs.	Ozs.	Rs.	
Bihar and Orissa —					
Singhbhum ..	1,13	11,776	..	..	....
Burma —					
Katha .	7 79	410	3 04	202	} Not available.
Upper Chindwin	30 81	2,981	7 69	717	
Hyderabad	10,617 6	6,10,195	12,390	5,88,695	
Madras	11,018	5,61,958	13,645	8,03,535	338
Mysore	485,248	2,13,62,846	472,958	2,64,31,539	23,925
Punjab	130·73	8,914	61·18	4,274	50
United Provinces	4.6	321	2·7	191	15
Total	507,26053	2,25,59,431	499,067·61	2,78,39,153	24,335

PETROLEUM.

Petroleum is found in India in two distinct areas—one on the east, which includes Assam, Burma, and the islands off the Arakan coast. This belt extends to the productive oil fields of Sumatra, Java, and Borneo. The other area is on the west, and includes the Punjab and Baluchistan, the same belt of oil-bearing rocks being continued beyond the borders of British India to Persia. Of these two the eastern area is by far the most important, and the most successful oil fields are found in the Irrawaddy valley. Yenangyaung is the oldest and most developed of these fields. Native wells have been at work here for over 100 years, and in 1886, prior to the annexation of Upper Burma, the output is estimated to have averaged over 2 million gallons a year. Drilling was begun in 1887. The Yenangyat field yielded a very small supply of petroleum before 1891, in which year drilling was started by the Burma Oil Company. Singu now holds the second place among the oil fields of India. Petroleum was struck at the end of 1901, and in 1903, 5 million gallons were obtained. In 1907 and 1908 the production of this field was 43 million gallons, and after a fall to 31¼ million gallons in 1910 it rose to 56½ million gallons in 1912. Several of the islands off the Arakan coasts are known to contain oil deposits but their value is uncertain. About 20,000 gallons were obtained from the eastern Barongo Island near Akyab, and about 37,000 gallons from Ramri Island in the Kyaukpyu district during 1911. Oil was struck at Minbu in 1911, the production for that year being 18,320 gallons which increased to nearly 4 million gallons in 1912. The existence of oil in Assam has been known for many years and an oil spring was struck near Makum in 1867. Nothing more, however, was done until 1883, and from that year up till 1902 progress was slow. Since that year the annual production has been between 2½ and 4 million gallons.

On the west, oil springs have been known for many years to exist in the Rawalpindi and other districts in the Punjab. In Baluchistan geological conditions are adverse, and though some small oil springs have been discovered, attempts to develop them have not hitherto been successful.

Quantity and Value of Petroleum produced in India during 1920.

	1920.	
	Quantity.	Value.
	Gal	Rs
Burma—(*a*)		
Akyab	9,770	2,447
Kyaukpyu	30,075	8,459
Yenangyaung	1,762,385,048	4,95,80,170
Singu	95,256,755	2,67,90,962
Yenangyat	3,176,231	8,93,315
Minbu	3,835,198	10,78,649
Thayetmyo	91,329	25,686
Upper Chindwin	1,022,766	2,87,653
Assam—		
Digboi (Lakhimpur)	8,206,850	2,57,630
Badarpur	8,151,322	6,11,349
Punjab—		
Attock	50,640	9,495
Mianwali	852	213
Total	293,116,834	7,95,46,328

(*a*) Value of petroleum produced in Burma has been calculated at annas 4-6-0 per gallon.

Imports of **Kerosine Oil** amounted in 1913-14 to 68,850,000 gallons. This figure fluctuates considerably from year to year, having risen in 1919-20 as high as 94,135,000 gallons, and having fallen in 1920-21 to 57,192,000 gallons.

Amber, Graphite and Mica.—Amber is found in very small quantities in Burma, the output for 1919 bring 7·4 cwts. valued at £616. Graphite is found in small quantities in various places but little progress has been made in mining except in Travancore. The total output in 1920 was 100 tons. India has for many years been the leading producer of mica, turning out more than half of the world's supply. In 1914, owing to the war, the output was only 38,189 cwts. compared with 43,650 cwts. in 1913. Owing to necessary restrictions with regard to the export of mica, the output fell off considerably in the year 1915, but subsequent demand in the United Kingdom for the best grade of ruby mica led to a considerable increase in production during the following years. The declared output of mica in 1919 shows a decrease of nearly 9,000 cwts., over that of the previous year, having dropped from about 54,700 cwts. to 45,700 cwts. In 1920 the output declined by 700 cwts. and the value of the exports was £1,065,438.

Tin, Copper, Silver and Lead.—The only persistent attempt to mine tin is in Burma. The output was for some time insignificant but rose in 1913 to 116 tons valued at £46,000 which fell to £38,000 in 1914. In 1919 Burma yielded 42,353 cwts. Copper is found in Southern India, in Rajputana, and at various places along the outer Himalayas, but the ore is smelted for the metal alone, no attempt being made to utilize the by-products. After a set-back the industry recovered in 1920 the outturn was 28,167 tons valued at £42 250 The only **Lead** mine of any importance being worked in the Indian Empire is that of Bawdwin, where a very large body of high-grade lead-zinc-silver ore has now been blocked out. For many years the smelting operations of the Company were directed to recovering lead and silver from the slags left by the old Chinese miners. Those slags, however, are now practically exhausted, and the mine has reached a stage of development at which a steady output of ore is assured In 1920 the output was 23,821 tons valued at Rs. 97,56,213.

Silver is obtained as a by-product in the smelting of the lead-zinc ores of Bawdwin. The total output in 1920 was 2,164,854 oz. valued at Rs 83,37,361.

Zinc.—A monograph on zinc ores issued by the Imperial Institute in 1917 says that during the past fifty years zinc ores have received but little attention in India, and no production was recorded until 1913. In 1914 the production was 8,553 tons, and although the output fell to 196 tons in 1915, there is a prospect of India becoming an important producer of zinc ore in the future. Important silver-lead-zinc deposits occur at Bawdwin, in Tawngpeng State, one of the Northern Shan States in Upper Burma. The mines are connected with the Mandalay-Lashio Branch of the Burma railways by a narrow-gauge line 51 miles long, the lines meeting at Manhpwe, which is about 544 miles from Rangoon. They were worked for many centuries by the Chinese for silver, and have long been known to contain zinc ore; until recently, however, no serious attempt appears to have been made to market the ore for its zinc values. In 1907 the present undertaking was started by the Burma Mines, Ltd., with the idea of recovering the lead from the old slag heaps left by the Chinese, estimated at 125,000 to 160,000 tons, and later to work the deposit. Smelting operations on these slags were first carried out at Mandalay, but later the works were transferred to Namtu, about 13 miles below the mines on the narrow-gauge railway. The deposits, which comprise an area of about 2,500 acres, have now been taken over by the Burma Corporation, Ltd., and one is being worked.

Gem Stones.—The only precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal, agate, cornelian, jadeite and amber. Amber has already been referred to; of the rest only the ruby, sapphire and jadeite attain any considerable value in production and the export of the latter has declined owing to the disturbances in China, which is the chief purchaser of Burmese jadeite. The output of diamonds is comparatively unimportant The output of the ruby mines in 1920 was 155,604 carats valued at Rs. 6,19,820

Wolfram.—The output of Wolfram in 1920 fell from 3,521 tons to 2,346.

Radio-active Minerals.—The General Report of the Director of the Geological Survey of India for 1913 includes a brief report by R. C. Burton on an occurrence of pitchblende at mica mines near Singar, Gaya district, Bengal. The pitchblende occurs as rounded nodules in a pegmatite that is intrusive in mica schists. Other minerals occurring in the pegmatite are mica, triplite, ilmenite, tourmaline, and uranium ochre; whitish columbite, zircon, and torbernite have also been recorded. Of these minerals triplite is stated to be the commonest.

The importance of the find of uranium oxide impregnating the triplite led to the discovery of weathered pitchblende, and as the pits were deepened the weathering became less and less until pure pitchblende was obtained. In the six months from July 1913 to February 1914, eight hundredweight of pitchblende was obtained from Abrakhi Hill together with six tons of uranium earth debris, five to six hundred tons of triplite and two tons of tantalite. These ores were raised under a prospecting license in respect of Abrakhi Hill alone and in March 1914, a mining lease for thirty years was obtained in respect of sixty square miles of the Singar estate. The first intention was to work only the five square miles round Abrakhi and a syndicate was formed for this purpose, which on the outbreak of war, was refused a Trading License on account of the German element in it.

Labour in Mines.

The question of the labour supply presents difficulties which are not encountered in countries where mining is a special calling. The majority of the persons working at the Indian coal mines are agriculturists, and the supply of labour, as experience has recently shown, depends to a material extent on the condition of the agricultural industry. "The major portion of those employed," says a report by the

Department of Statistics, "are the aboriginal Dravidians from the mountainous country of Chota Nagpur and the Central Provinces, but a large number of other castes is also employed, particularly in the outlying fields. The majority of the workmen follow the vocation of agriculture as well as mining and return to their homes during the period of sowing and reaping, the result being that at such times the output of many of the mines is greatly restricted. At the Makum collieries of the Assam Railway and Trading Company, where the labour question continues to be a very difficult one, nearly a third of the total labour force are Mekranis, Chinese, and Nepalese. The Chinese have, however, proved unsatisfactory, and it is unlikely that they will in future be recruited." With the increase in the depth of working the need for a skilled mining class will become accentuated, and if the price of coal remains at a sufficiently high level, further development in the introduction of coal-cutting plants may take place. During the period of high prices some nine years ago cutting plants were introduced in order to augment the output. These worked successfully, but the cost proved to be high and as labour conditions improved the machines were discarded.

Inspection of Mines.

During the year 1919 the average number of persons working in and about the mines regulated by the Indian Mines Act was 249,156. This is an increase of 11,418 persons or 48 per cent. Of these persons 156,741 worked underground and 92,415 on the surface. One hundred and fifty-one thousand eight hundred and forty-one were adult males, 89,565 were adult females and 7,750 were children under 12 years of age. Those employed in coal mines numbered 190,052, which is 13,783 in excess of those employed in 1918

Accidents.—During the year 1919 at mines regulated by the Indian Mines Act, 1901, there were 252 fatal accidents, being an increase of 43 over the number which occurred in 1918, and an increase of 84 as compared with the average number of the preceding five years.

These accidents involved the loss of 312 lives, which is an increase of 69 over the number of lives lost in 1918. Of these persons 250 were males and 62 were females. It is remarkable that the number of females killed was almost double that of the previous year. In three separate accidents the number of lives lost was 14, 7 and 6, respectively. In two cases 4 lives, in six cases 3, and in eighteen cases 2 lives were lost.

The causes of these accidents have been classified as follows:—

(*a*) Misadventure	124
(*b*) Fault of deceased	90
(*c*) Fault of fellow workman	15
(*d*) Fault of subordinate officials ..	4
(*e*) Fault of management	9

More than half of the accidents were due to falls of roof and sides, which numbered 128 or 18 more than in the previous year. Many of the accidents could have been avoided—says the Report of the Chief Inspector of Mines—by closer and more skilled supervision. If the inspections of mine officials were more frequent there would be fewer cases of accidents to persons working in unauthorized places.

The number of **accidents occurring in shafts** was 34, or almost double the number which occurred in the previous year. In one such accident no less than 14 lives were lost. The principal increase was in accidents due to persons falling in shafts and things falling into shafts. It should be remembered that year by year there are fewer mines in which the mineral is brought to the surface through inclines, and the number of shafts is constantly increasing. Most of the accidents were due to carelessness, usually on the part of the deceased.

There was a large increase in the number of accidents occurring on haulage roads. The number of such accidents was 40, as compared with 21 in 1918 Fourteen were caused by tubs running wild on mechanical haulage roads and sixteen were due to other causes on similar roads. Ten took place where tubs were being pushed by hand. Most of the accidents could have been avoided by ordinary care. The practice of sitting and even sleeping on haulage roads should be more sternly prohibited. At many mines the provision of separate travelling roads and insistence on their use has largely reduced the danger to work-people from accidents of this class.

There was only one fatal explosion of **fire-damp**, causing one death, but three explosions by which persons were burnt took place. The improvement in respect of this class of accident is directly due to the increased use of safety lamps at mines where fire-damp is known to occur.

Only three accidents, causing three deaths, were due to **electrocution**, which is the same number as in 1918. In view of the large increase in the use of electrical machinery in mines this is satisfactory.

The **death rate** per thousand persons employed was 1·25 while that of the preceding 5 years was 1·02. At coal mines only these figures were 1·37 and 1·11, and at mines other than coal 0·88 and 0·74. At mines in the United Kingdom during the 10 years ending with and including 1918 the average death rate per thousand persons employed underground was 1·51.

The death rate per million tons raised at coal mines only was 11·95, while that of the preceding 5 years was 9·80. At coal mines in the United Kingdom during the 10 years ending with and including 1917 the death rate per million tons raised was 5·08

"The large increase in the death rate from accidents is deplorable", writes the Chief Inspector. "Perhaps the chief reason for the increase was the shortage of skilled mine managers. The great demand for the produce of the mines has called for increased output and more strenuous operation. Under such conditions risks are liable to be taken which would not be considered justifiable at other times."

The deaths occurring in each class of mines were as follows:—260 in coal mines, 19 in wolfram mines, 12 in manganese mines, 10 in mica mines, 4 in copper mines, 3 in limstone mines, 3 in an iron mine and one in a steatite mine.

Chief Inspector of Mines in India: G. F. Adams, M. INST. C. E. *Officiating Chief Inspector*: R. R. Simpson.

Bibliography.—Report of the Chief Inspector of Mines in India, under the Indian Mines Act (VIII of 1901) for 1919, by the Officiating Chief Inspector of Mines. Report on the Mineral Production of India during 1918. By H. H. Hayden, C.I.E., Director, Geological Survey of India. Note on the Mineral Production of Burma in 1919. Monographs on Mineral Resources published by the Imperial Institute.

CHEMICAL SERVICES COMMITTEE.

The Chemical Services Committee, which was appointed by the Government of India in October 1919, under the Presidentship of Professor J. F. Thorpe, issued its report and made its recommendations in 1920.

The terms of reference to the Committee were:—

(1) To consider whether an all-India Chemical Service is the best and most suitable method of overcoming the difficulties and deficiencies pointed out by the Indian Industrial Commission. (2) In the event of the Committee approving the principle of an all-India Service, to devise terms of recruitment, employment and organisation; to indicate the extent to which chemists already in Government employ should be included in that service; and to suggest what should be the relations of the proposed organisation with the public and with Departments of the Government of India and of Local Governments. (3) In particular to frame proposals for the location, scope and organisation of institutions for chemical research.

The following is a summary of the chief recommendations:—

(1) That a chemical service should be constituted.

(2) That the service should be called the Indian Chemical Service.

(3) That the service should be controlled by a Director-General.

(4) That a Central Imperial Chemical Research Institute should be erected at Dehra Dun under the Director-General of the Chemical Services as Director, assisted by a number of Deputy Directors.

(5) That each Deputy Director should be in charge of a separate Department and that, in the first instance, there should be four Departments, (*a*) Inorganic and Physical Chemistry, (*b*) Organic Chemistry, (*c*) Metallurgical Chemistry, (*d*) Analytical Chemistry.

(6) That a Provincial Research Institute under the control of the Local Government should be erected in each Province near the chief seats of industry in that Province, and that each Provincial Research Institute should be under a Director of Research.

(7) That the **functions of the Central Imperial Institute** should be as follows:—

To create new industries and to carry out the development of new processes up to the "semi-large" scale, or further if necessary: to investigate those problems of a fundamental character, arising from the work of the Provincial Institutes, which have been transferred to the Central Institute by the Local Director of Research in consultation with the Director General. Such problems will be those which have no apparent immediate practical importance, but which in the opinion of the Director-General and the Director of Researches are likely to lead to discovery of fundamental industrial importance affecting the industries of the country generally assist in the co-ordination of the work in progress in the Provinces, both by means of personal discussion between the officers of the Central and Provincial Institutes during the course of the tours made by the Director-General and the Deputy Directors, and by means of periodical conferences of Provincial and Imperial officers to carry out such analytical work as may be required and to correlate the methods of analysis in general use throughout the country; to maintain a Bureau of information and Record Office; and to issue such publications as are considered necessary.

(8) That the **functions of the Provincial Research Institutes** should be as follows:—

To maintain close touch with the works chemists and with the works generally and to work out any problems which may be submitted to them; to develop and place on an industrial scale new industries which have been previously worked out on the laboratory and "semi-large" scale by the Central Imperial Institute; to carry out such other work as may be necessary to establish and foster new industries peculiar to the Province; to carry out such analytical work of a chemical character as may be required in the Province, and to erect and control substations in such parts of the Province as the development of industry may require.

(9) That, under 8 above, arrangements should be made by which a firm supplying a problem should have the use of the solution for an agreed period of time prior to its publication.

(10) That members of the service should be lent to private firms as occasion demanded and should during the period of their service be paid an agreed sum by the firms.

(11) That the Research Institutes should not undertake manufacture in **competition with private enterprise**, but that chemical industries developed in accordance with 8 above should be handed over to private firms as soon as practicable.

(12) That whenever necessary experts, should be employed to establish chemical industries based on known processes.

(13) That the work of the Central Imperial Institute should be controlled by a **Board** of which the Director-General will be Chairman and which will comprise the Deputy Directors and such other persons as the Government of India may determine.

(14) That the Central Imperial Institute should have no administrative control over the Provincial Research Institute, but that no appointment as Director of Research should be made without consulting the Director-General.

(15) That the Director-General and Deputy Directors should visit Provincial Research Institutes periodically and co-ordinate the work done in each

(16) That chemists employed at Provincial Research Institutes should be appointed in the first instance by the Local Government in consultation with the Director of Research and the Director-General.

(17) That chemists so appointed should be members of the Chemical Service and should be seconded for service under the Provincial Governments and be paid by them.

(18) That agricultural chemists should not at present be included in the service.

(19) That a Ministry of Science should be created as soon as practicable.

(20) That the Deputy Director in charge of Analytical Chemistry should co-ordinate the methods of analysis in use throughout India and should act in an advisory capacity to the various Provincial Government Analysts who should be attached to each Provincial Research Institute.

(21) That Provincial Government Analysts should be under the control of the Directors of Research and should take over the chemcial work now carried out by the Chemical Examiner and the Government Test House.

(22) That the question of the connection of the Indian Institute of Science, Bangalore, with the Chemical Service should await purposals from the Council of the Institute.

(23) That a Bureau of Information and Record Office, a Library, and a Museum should be attached to the Central Imperial Institute and to each Provincial Research Institute.

(24) That a **Chemical Survey of India** should be carried out at the earliest possible moment.

(25) That the Government of India should give maintenance and equipment grants to students to enable them to undergo the training in chemical research required for recruitment.

(26) That liberal grants, free from the customary accounts, restrictions, should be given for the initiation of the scheme and for the development of industries through the medium of chemical research.

Action on this report has for the time being been suspended pending the appointment of a successor to Sir Thomas Holland.

CREMATION.

Cremation as a means of disposing of the dead is commonly adopted throughout India by the Hindus, but has been little adopted among the Europeans in India. A crematorium was started some years ago in Calcutta close to the Lower Circular Road Cemetery, at a cost of Rs. 40,000. But the return for this expenditure is disappointing. Only five or six cremations take place in Calcutta each year, in spite of the fact that the fee for cremation has been fixed by the Cremation Society of Bengal at the very low figure of Rs. 30, subject to reductions in the case of poor families. The reason for this is thought to be that, when possible, Europeans go home to die, and the Native Christians and Eurasians are very largely Roman Catholics among whom a prejudice exists against this form of the disposal of the dead. In Bombay arrangements have recently been made for a small area in the Sewri Cemetery to be walled in, and for cremations to be carried on within it in the primitive style of the country, but in such a way as to preserve the ashes

Stock Exchanges.

There are about 416 Share and Stock Brokers in **Bombay**. They carry on business in the Brokers' Hall, bought in 1899 from the funds of the **Share and Stock Brokers' Association** formed to facilitate the negotiations and the sale and purchase of Joint Stock securities promoted throughout the Presidency of Bombay. Their powers are defined by rules and regulations framed by the Board of Directors and approved by the general body of Brokers The Board has the power to fix the rates in times of emergencies. It is composed of Kikabhai Premchand (President); Manekalal Jethabhai, N. P. Karani, K.B.P. Shroff, Vurjivandas Tribhovandas, Amratlal Kahdas, Kaikhosroo H Patch, Choonilal Virchand Jehangir Bhicaji, J P, J S Gazdar, Gulamhusen Madubhai, Nanabhai Tulakchand, Hirachand Vasanji, Jamnadas Morarji, J P, Dadabhai S. Madon HONORARY SECY AND TREASURER —A H. Madan

At first the admittance fee for a broker was Rs. 5 which was gradually raised to Rs. 7,000 The fee for the Broker's card has increased and it was recently sold by public auction for Rs. 21,800. The rules of the Association were revised in October 1916 and from the New Year the purchaser of shares has to pay the stamp and transfer fee instead of the seller There are two classes of Exchange Brokers, Europeans and Indians, the latter being certified for recognition by the native Stock Exchange. Business in Government Paper and all other Trustees' Authorised Securities is carried on under the rules of the Bombay Stock Exchange, but in the street outside the hall.

In November 1917 a second Stock Exchange was opened in Bombay, with its headquarters in Apollo Street. The directors of this exchange known as the **Bombay Stock Exchange, Ltd.**, are Sir Sarupchand Hukamchand, Kt., Rameshwardas Birla, Lachhmandas Daga, Rai Bahadur Jamnalal R Bachhraj, Kastorbhai M Nagarsheth, Madanlal Chaudhry, Jyotendra L. Mehta, Shriram Ramnarayan, Fatechandji Ruiya, Naranji Dayal, Dulichand Dalmia and Fazalbhai Ibrahimbjhai Rahimtulla. This separate Exchange came to an end in 1921, when it was merged in the older body.

For many years the **Calcutta** Share Market had its meeting place in various gullies in the business quarter and was under no control except that of established market custom In 1908 the **Calcutta Stock Exchange Association** was formed, a building was leased in New China Bazar Street now called Royal Exchange Place, a representative committee was formed, and the existing trade customs were focussed into rules drawn up for the conduct of business. Admittance as a member of the Stock Exchange is by vote of the committee, and the entrance fee is at present Rs. 500. The market custom differs very materially from that of most other Stock Exchanges since there are no settlement days, delivery is due the second day after the contract is passed and sales of securities are effected for the most part under blank transfers. Another difference in procedure as compared with the London Stock Exchange is that there are no "Jobbers" in the Calcutta market. The Dealers who take their place, more or less, are not compelled to quote a buyer's and a seller's rate and are themselves Brokers as well as dealers, calling upon the Banks and other clients and competing with Brokers.

There are about 150 members, besides outside brokers, the former consisting of European, Jewish, Marwari, and Bengalee firms. The Marwaris predominate. The volume of *bona fide* Investment business is comparatively small and insufficient for the number of Brokers. The principal business transacted on the Calcutta Stock Exchange is connected with the shares in Jute Mills, Coal Companies, Tea Companies registered in India, Miscellaneous industrial concerns (such as Paper, Flour, Sugar), Railway and Transit Companies and Debentures, the latter comprising those of Industrial concerns and Trustees, Investment Securities, namely, Municipal and Port Trust Debentures. When speculative operations are being actively engaged in, which frequently take the form of forward contracts for delivery in three months' time, the value of securities changing hands may aggregate as much as a crore of Rupees per month, but since the trade is not constant and one year differs very much from another, it would be difficult to estimate what the average annual turn-over would amount to. The association has an honorary secretary and is not at present affiliated to the Bengal Chamber of Commerce.

The **Madras** Stock Exchange situated No 9 Broadway (in Tata Industrial Bank Buildings) consists of about 100 Members of which 25 are working Members. It was opened on 6th April 1920 and deals principally in Mill shares Business is regulated by rules drawn up by the Directors There is a Board of arbitration The Directors are Abdul Hussain Kalhb, Rai Bahadur Bansi Lal Abeercband, Goculdass Gowardandas, Hassasingh Jessasingh, M. Jammal Mohamed Saib, C M. Kothari (Hon. Secry and Treasurer), M. C. T Muthia Chetty, C G. Naravan Doss, and Ramjee Callianjee Seth. There is an admittance membership card of Rs. 1 000 and an annual subscription of Rs. 100. The original 100 members were elected by the first Directors and each of the working members have deposited a security of Rs 3,000 which is held by the Stock Exchange Committee A membership card sold recently by auction changed hands at Rs. 3,125.

Industrial Arts.

The ancient industrial arts of India formed two distinct groups. The first included those allied to, and dependent upon, architecture; the second comprise those applied to articles devoted to religious ritual; military weapons and trappings, domestic accessories; and to personal adornment.

The articles of the first group were intended for some fixed and definite position, and the style of their design and the character of their workmanship were dictated by that of the building with which they were incorporated. Those of the second group were movable, and the range of their design was less constricted and their workmanship was more varied. Examples of work in both groups are so numerous, and the arts comprise such a diversity of application, that only a cursory survey can be attempted within the limits of a short review. Although the design and treatment differ in the two groups, the materials used were often the same. These materials cover a very wide range but space only permits of reference to work applied to the four materials upon which the Indian craftsman's skill has been most extensively displayed. These are stone, wood, metal and textiles.

Before dealing separately with each of these materials a few words upon the principal Indian styles are necessary. The two distinctive styles are Hindu and Mahomedan. The former may be termed indigenous, dating as it does from remote antiquity, the latter was a variation of the great Arabian style, which was brought into India in the fourteenth century, and has since developed features essentially Indian in character. The art of both Hindus and Mahomedans is based upon religion and the requirements of religious ritual. The obvious expression of this is shown in the different motifs used for their ornament. In Hindu art all natural forms are accepted and employed for decorative purposes; but in that of the Mahomedans, nearly all natural forms are rejected and forbidden. The basis of Mahomedan decoration is therefore mainly geometrical. In each of them, racial characteristics are strikingly exhibited. The keynote of Hindu work is exuberance, imagination and poetry; that of Mahomedan, reticence, intellect and good taste. The Hindus are lavish, and often undiscriminating, in their employment of ornament; the Mahomedans use more restraint. In fact the two styles may be compared, without straining the analogy, to the Gothic and classic styles in Europe. In both styles the fecundity of ideas and invention in design are marvellous, and the craftsmanship often reaches a very high standard. Hindu art had been subjected throughout the ages to many foreign influences, but the artistic instincts of the people have proved so conservative that, whether these alien ideas came from the east or the west, they have been absorbed, and are now stamped with a definite Indian character. Recognition of this fact alone should relieve the anxiety of those critics who fear that the penetration of Western art and culture into India at the present time will eventually rob Indian art of its national character.

Stone Work.—Carved stone work is the principal form of decoration employed in Hindu temples. In variety and scope it ranges from the massive figures in the Buddhist and Brahminical Cave Temples, and the detached sculpture of the temples of Southern India, to the delicately incised reliefs and elaborately fretted ornament of the Jain temples at Mount Abu. A curious fact in relation to Hindu work is that priority of date appears to have no relation to artistic development. It is not possible to trace as in the case of Greek, Roman and Mediæval craftwork, the regular progressive steps from art in its primitive state to its culminating point and its subsequent decay. Styles in India seem to spring into existence fully developed, the earlier examples often exhibiting finer craftsmanship than those of a later date. There can be little doubt that stone carving in India was simply the application of the wood carvers' art to another material. The treatment of stone by the Hindu craftsmen, even in the constructive principles of their buildings, bears a closer resemblance to the practice of the wood-worker than to that of the stone mason. The earlier wooden examples from which the stone buildings and their decorations were derived have long since disappeared, but their influence is apparent. The keynote of Hindu design is rhythmic rather than symmetrical; that of their craftsmanship, vigour rather than refinement. In the carving of the human figure and of animals great power of expressing action is shown, and this spontaneous feeling is preserved despite the greatest elaboration and detail. The industry displayed is amazing, no amount of labour appears to have daunted the Hindu craftsmen in carrying out their huge and intricate schemes of decoration.

The stone carving on Mahomedan buildings, except where Hindu carvers have been allowed a free hand, is much more restrained than that on Hindu temples. The fact that geometrical forms were almost exclusively used, dictated lower relief and greater refinement in the carving, while the innate good taste of the designers prompted them to concentrate the ornament upon certain prominent features, where its effect was heightened by the simplicity of the rest of the building. The invention displayed in working out geometrical patterns for work screens, inlay, and other ornamental details appears to be inexhaustible; while wonderful decorative use has been made of Arabic and Persian lettering in panels and their framing. To obtain a rich effect the Hindus relied upon the play of light and shade upon broken surfaces, the Mahomedans to attain the same end used precious materials, veneering the surfaces of their buildings with polished marble which they decorated with patterns of mosaic composed of jade, agate, onyx and other costly stones. Although the art of inlaying and working in hard stones was of Italian origin, it proved to be one eminently suited to the genius of the Indian craftsman; and many wonderful examples of their skill in the form of book rests, tables, thrones, footstools, vases and sword handles are extant to show the height of proficiency they attained. The treatment of precious stones by Indian jewellers may here be referred

to. Sir George Birdwood states that "the Indian jeweller thinks of producing the sumptuous, imposing effect of dazzling variety of rich and brilliant colours and nothing of the purity of his gems." This is true in a general sense and "full many a gem of purest ray serene" was utterly ruined by crude cutting and piercing. But although as early as the sixteenth and seventeenth centuries diamonds and precious stones from the Indian mines were taken to Europe to be cut, many of the finest jewels found their way back to the treasure houses of Indian princes.

Wood Work.—With a fine range of timbers suitable for the purpose, wood has played a great part in the construction and decoration of Indian buildings. Unfortunately, most of the ancient wood work has been destroyed by the action of the climate and the teeming insectivorous life of India: and that which escaped these enemies was wiped out by fire and the sword. It is therefore only possible to conjecture the height of artistic development these buildings and their decorations displayed by the copies in stone which have been preserved. Few if any examples of a date earlier than the sixteenth century are to be found. Many of these, and specimens of a later date to be seen in towns and cities throughout the country, are masterpieces of design and craftsmanship. The carved timber fronts and inner courtyards of houses in Ahmedabad, Nasik, and other parts of Western India are notable for their picturesqueness and beauty; the structural beams, the overhanging balconies, with their screens and supporting brackets, being carved in a manner which unites richness of effect with good taste and propriety. Of furniture, as the term is now understood, few examples were in use in India before Europeans introduced their own fashions. These were confined to small tables and stools, book rests, clothes chests and screens, the designs of which conformed somewhat closely to the architectural style of the period. Many of these were decorated with inlays of coloured woods, ivory and metal; while in some cases the wooden basis was entirely plated with copper, brass or silver. In Southern India, where close grained sandalwood is grown, jewel cases and boxes are enriched with carving executed with the attention to detail and the finish generally associated with the carving of ivory. Coloured lac was freely used to decorate many articles of furniture, especially those turned on the lathe; and rich colour effects were obtained in this, perhaps the most distinctive and typically Indian development of decoration as applied to woodwork.

Metal Work.—With the exception of weaving, the metal working industry employed and still employs the greatest number of artistic craftsmen in India. Copper and brass have always been the two metals most widely used for domestic purposes by Mahomedans and Hindus. The shapes of many of these humble vessels are among the most beautiful to be found in the country. They exhibit that sense of variety and touch of personality which are only given by the work of the human hand; and the shapes are those which grow naturally from the working of the material with the simplest implements. In the technical treatment of brass and copper Indian craftsmen have shown a taste and skill unsurpassed by those of other nations, except in the department of fine casting. In this, and in the working of gold and silver, a higher standard of technical and constructive exactness has been reached by the metal workers of Europe and Japan. It may be taken as an axiom that the more beautiful the shape of an article is, and this especially applies to metal work, the less need exists for the decoration of its surface. It is equally true that the highest test of craftsmanship is the production of a perfect article without any decoration. The reason being that the slightest technical fault is apparent on a plain surface, but can be hidden or disguised on one which is covered with ornament. The goldsmiths and silversmiths of India were extremely skilful and industrious, but judged by this test their works often exhibit a lack of care and exactness in the structural portion and a completely satisfactory example of perfectly plain work from the hands of the gold and silversmiths of India is rarely to be met with. Much of the excessive and often inappropriate ornamentation of the articles that they produced owed its application as much to the necessity of hiding defective construction as it did to any purely decorative purpose. For many generations, ornaments of gold and silver were regarded in the light of portable wealth, a practice which naturally made for massiveness. These solid ornaments are most effective and picturesque; and, despite an enormous output of elaborate and delicate work from their hands, the most valuable contribution of the Indian metal workers to the sum total of man's artistic use of the precious metals will probably be found to lie in a certain barbaric note which distinguishes these pieces—a note not present in the craft work of other countries. In the design of Hindu gold and silver ornaments, religious symbols have been extensively used. The ornaments which bedeck the early sculptured figures, and those depicted in the paintings at the Cave Temples of Ajanta are precisely the same in design and use as similar articles made at the present time, thus affording a striking evidence of the inherent conservatism of the Hindu people and its effect upon an industrial art that makes a closer personal appeal than any other.

Textiles.—The textile industry is the widest in extent in India and is that in which her craftsmen have shown their highest achievements. Other countries, east and west of India have produced work equal, if not superior, in stone, wood, and metal; but none has ever matched that of her weavers in cotton and wool, or excelled them in the weaving of silken fabrics. Some of the products of the looms of Bengal are marvels of technical skill and perfect taste, while the plum bloom quality of the old Cashmere shawls is an artistic achievement which places them in a class by themselves. Weaving being essentially a process of repetition, was the first to which machinery was applied, and modern science has brought power loom weaving to such a state of perfection that filaments of a substance finer even than those of Dacca, which astonished our ancestors, are now produced in the mills of Lancashire. But

for beauty of surface and variety of texture, no machine-made fabrics have ever equalled the finest handwork of the ancient weavers of India. Many of the most beautiful varieties of Indian textile work have disappeared, killed by the competition of the power loom: and it is to be feared that under modern conditions they are never likely to be revived. In other branches of art as applied to textiles India does not hold so pre-eminent a position as in that of weaving. The printed silks and calicoes of the seventeenth and eighteenth centuries deservedly held a high place in the estimation of Western nations, whose craftsmen learnt many valuable lessons from the technical skill, and artistic taste they display. In embroidery and fine needlework the West and the Far East have more than held their own, while nothing approaching the tapestries made in Europe in the middle ages has been produced in India. The nearest approach to these is in carpets and rugs This art was introduced from Persia, but Indian craftsmen have never succeeded in equalling the finest work of their instructors either in colour or design.

Modern Conditions.—In the foregoing sketch of the ancient industrial art of India, as applied to the four principal materials employed, only a general indication of its more striking characteristics has been possible. A volume would be required to give a detailed description of any one of them, and would leave many other minor arts to be considered. All these branches of art came into existence, were developed and flourished in India when social and economic conditions were vastly different from those of the present day. Like similar artistic crafts carried on in Europe up to the end of the eighteenth century, they were executed by hand labour. The processes involved had not been discovered by scientific inquiry, such as is now understood by the phrase, but were the outcome of generations of slowly built up experience. We now come to the effect upon them of the changed conditions which have revolutionised industrial art in Europe during the last century.

The invention of the steam engine, and the application of mechanical power and scientific research to industry in Europe, mark the dividing line between ancient and modern industrial art. Not only on its technical side is this so, but the effect of these changes has been to alter the character of the work itself and the spirit which animated the craftsmen. In place of the ancient ideal of variety in design and treatment, which meant a limited output, the modern one of uniformity and unlimited output has been substituted. The capitalist has displaced the master craftsman ; the organised factory, the small workshop ; specialisation and division of labour have taken the place of general proficiency among the artisans ; the function of the designer has been separated from that of the craftsman; local markets have been extended to serve the whole world; and the skilled handicraftsman has, in a great measure, become a machine-minder. It took about one hundred years of gradual change for the craftsmen of Europe fully to adjust themselves to these altered conditions ; and during the greater portion of that period India protected by the difficulties of transport, continued its immemorial practice. Fifty years ago this protective barrier was removed by the opening of the Suez Canal, and the handicraftsmen of India have since been struggling to avoid the same fate which overtook those of Europe half a century before. With less time to adapt themselves to the changed conditions the Indian craftsmen have had to meet the competition of European rivals already fully equipped with new and unknown weapons. Even before this period of intense competition, observers interested in Indian craftwork had noticed evidences of its deterioration. The falling off, both in design and workmanship, was attributed to the conservative practice of the craftsmen ; to the gradual loss of foreign markets, and to the long period of internal disorder which had deprived them of both the patronage of the rulers of an earlier age and the stimulating contact with foreign craftsmen who had previously been attracted to the splendid courts at Delhi and Agra. During the same period, an even greater degradation in design had overtaken the craftwork of Europe. This was due to entirely different causes, namely to the introduction of machinery. Attention had been so concentrated upon speedy production, mechanical accuracy and commercial organisation that beauty of design had been almost entirely neglected. This was so forcibly demonstrated at the International Exhibition of 1851 that efforts were at once made to bring art and industry together once more. Schools of Art and Museums were founded throughout England and the same system was copied in a tentative and timid fashion in India. The function of these institutions was accurately estimated in England, where the artistic industries were already highly organised and were commercially successful, and whose products were to be found in every market of the world. Their business was to assist these industries by training a body of efficient designers capable of furnishing the factories with suitable designs, new or old, and in any style, to satisfy the requirements of customers in any country. It was never supposed for an instant that a School of Art could lead an industry. In India their function was as completely misunderstood as were the causes of the depression in Indian craftwork. The schools were not only expected to lead the industries which were living, but to revive those which were moribund, and resurrect those which were dead. Archæologists ignoring the economic factor vainly conceived and propounded the idea that the salvation of the industrial arts was to be found in strict adherence to ancient methods of work and a repetition of the old patterns at a time when the home markets of the craftsmen were swamped with cheap machine-made goods printed in the old pattern which had been copied and adopted by European designers. In India, the cart was put before the horse, and, instead of first reorganising the artistic crafts, and placing them on a commercial basis that would have afforded them a decent chance of meeting Western competition, and then instituting art and craft schools in every industrial centre to assist them, an entirely inadequate number of art schools was founded and the crafts were left to shift for themselves. The Japanese have demonstrated the possibility of transforming a nation of

individual artistic craftsmen into one of co operative industrial craftsmen; and however much one may regret the necessity, the only road to the economic revival of craftwork in India is that which has already been taken by Western nations and Japan. That work of the same quality, or even of a similar character to that which was done in the past, will be produced under the new system cannot be expected. Both in Europe and Japan the change has been followed by deterioration in design, and India cannot hope to escape where others have suffered. But the artistic instinct and a love of beautiful things are widespread and firmly rooted in the Indian character. The craftsmen possess powers of invention in design equal to that of any other people, but these have been suppressed for a century by the depressing conditions with which they have had to contend. If the artistic industries can be established upon a basis in conformity with, and not in antagonism to, modern economic conditions, the artistic instinct and technical skill of Indian craftsmen will revive and India will regain the honourable place she once held in the world of art. In the report of the Indian Industrial Commission the need for some State-aided system of industrial and commercial organisation of the industrial arts with an expanded scheme of technical and artistic instruction for the craftsmen has been recognised; and valuable suggestions were made by experts who gave their evidence when the Commission visited the different Provinces. The success of the scheme recommended by the Commission will depend entirely upon the energy with which it is applied, and the practical knowledge and the assistance required by each of the different crafts on the part of those who control it. If, in addition, the same financial assistance and encouragement are given by the Imperial and Local Governments to the Indian craftsmen that have been bestowed by their own Government upon the art workers of Japan, industrial art in India will quickly emerge from the cloud of depression, which has hung over it for a century past, into the sunlight of prosperity.

The Fisheries of India.

The fisheries of India, potentially rich, as yet yield a mere fraction of what they could were they exploited in a fashion comparable with those of Europe, North America or Japan. The fishing industry, particularly the marine section, has certainly expanded considerably within the last 50 years concurrently with improvement in the methods of transport and increase in demand for fish, cured as well as fresh, from the growing populations of the great cities within reach of the seaboard. The caste system, however, exerts a blighting influence on progress; fishing and the fish trade are universally relegated to low caste men who alike from their want of education, the isolation caused by their work and caste, and their extreme conservatism, are among the most ignorant, suspicious and prejudiced of the population, extremely averse from amending the methods of their forefathers and almost universally without the financial resources requisite to the adoption of new methods, even when convinced of their value. Higher caste capitalists have hitherto fought shy of association with the low caste fishermen, and, except in the case of joint stock companies to engage in large operations on new lines, these capitalists cannot be counted upon to assist in the development of Indian fisheries. As in Japan, it appears that the general conditions of the industry are such that the initiative must necessarily be taken by Government in the uplift and education of the fishing community and in the introduction and testing of new and improved apparatus and methods.

The first local Government to lead the way was that of Madras, which in 1905 initiated an investigation of the industry, both marine and fresh-water, appointing Sir F. A. Nicholson to supervise operations. Bengal followed suit in 1906, and from these beginnings have sprung the local Fisheries Departments of Madras, Bengal, and Behar and Orissa. Bombay, the remaining seaboard province, has comparatively small fresh-water interests compared with Madras and Bengal, and as it happens that her marine fisheries are favoured with good harbours and the most enterprising race of sea-fishermen in India, there was less urgent need for State help in the industry. Hence fisheries there are only now becoming the subject of Government solicitude, their care being apportioned to the newly created Department of Industries, which imported a steam trawler from England in 1921, now engaged upon the survey of the local trawl grounds.

Madras.

The Madras coast line of 1,750 miles is margined by a shallow-water area within the 100 fathom line of 40,000 square miles; outside of a mere fringe inshore, this vast expanse of fishable water lies idle and unproductive. The surf-swept East coast is singularly deficient in harbours whereon fishing fleets can be based, and so from Ganjam to Negapatam, the unsinkable catamaran, composed of logs tied side by side, is the only possible sea-going fishing craft. Its limitations circumscribe the fishing power of its owners and consequently these men are poor, and the produce of their best efforts meagre compared with what it would be if better and larger boats were available and possible. The West coast is more favoured. From September till April, weather conditions are good enough to permit even dugout canoes to fish daily. The people of this coast are fond of fish and, as no difficulty is found in beaching canoes and boats throughout this season, the fishing population is a large one. The 1911 Census gave 75,013 adults as subsisting on fishing industries in Malabar and S. Kanara, a small number after all, considering the immense wealth of these seas. The chief fishes are sardines, mackerel, catfishes and jewfishes (*kora* or *gol*); the two first overshadow all others. So greatly in excess of food requirements are the catches of sardines that every year large quantities are turned into oil and manure. Fishing outside the 5-fathom line is little in evidence, save by Bombay boats (Ratnagiri) which are engaged in drift netting for bonito, seer and other medium-sized fishes. These strangers are enterprising fishers and bring large catches into Malpe and Mangalore and other convenient centres; the material is largely cured for export.

Fish-curing is practised extensively everywhere on the Madras coasts; its present success is due primarily to Dr. Francis Day who, after an investigation during 1869-71 of the fisheries of the whole of India, pressed for the grant to fishermen of duty-free salt for curing purposes within fenced enclosures. He advocated much else, but the time was not ripe and the salt concession was the sole tangible result of his long and honourable efforts. His salt suggestions were accepted by the Madras Government, and from 1882 a gradually increasing number of yards or bonded enclosures were opened at which salt is issued free of duty and often at rates below the local cost of the salt to Government. At present about 140 of such yards are scattered along the coast and over 50,000 tons of wet fish are annually cured therein.

The **pearl** and **chank** fisheries in Palk Bay and the Gulf of Mannar are Government monopolies. The former are now of little value and no remedial measures seem possible; the latter have been brought to a high state of efficiency and bring in substantial returns, the net profit for 1920-21 was Rs. 37,196. Chanks or conches (*Turbinella pirum*) are handsome porcelain—white shells of great thickness and considerable size, much in demand in Bengal, particularly Dacca, where the industry centres, for manufacture into bangles.

The **inland fisheries** of Madras compare unfavourably with those of Bengal. Many of the rivers dry up in the hot season and few of the many thousands of irrigation tanks throughout the province hold water for more than 6 to 9 months. As a consequence inland fisheries are badly organized and few men devote themselves to fishing as their sole, or even main, occupation. The custom is to neglect or ignore the fishery value of these streams and tanks so long as they are full of water; only when the streams shrink to pools and the tanks to puddles do the owners or lessees of the fishing rights turn out to catch fish. The result is a dearth of fish throughout the greater part of the year,

a glut for a few days, and often much waste in consequence. The chief fresh-water fishes of economic importance are the murrel, notable for its virtue of living for considerable period out of water, various carps, and catfishes, the hilsa (in East Coast rivers only), and the catla. In the Nilgiris, the Rainbow trout has been acclimatised and thrives well. The Government working in conjunction with the Nilgiri Game Association maintain a hatchery at Avalanche, where quantities of fry are hatched and reared for the replenishment of the streams of the plateau.

The Madras Department of Fisheries. As Government attention has been given in Madras over a longer period to the improvement of fisheries, and a larger staff concentrated upon the problems involved than elsewhere, this Presidency has now the proud position of knowing that her fisheries and collateral industries are better organized and more progressive than those in other provinces. The credit for the wonderful success which has been achieved and the still greater promise of the future, is due in large measure to the wise and cautious plans of Sir F. Nicholson, who from 1905 to 1918 had the guidance of affairs entrusted to him. In 1905 he was appointed on special duty to investigate existing conditions and future potentialities ; in 1907, a permanent status was given by the creation of a Fisheries Bureau, and this in turn has developed into a separate Department of Government, now administered by Mr. James Hornell, F.L.S., as Director. The higher staff consists of a Marine Biologist, three Assistant Directors and a Cannery Manager. The first is charged primarily with the investigation of the life-histories of the principal food-fishes of the coast ; the others have charge respectively of (*a*) the departmental fisheries (pearling, chanks beche-de-mer, etc.) and with experiments in the developments of inshore and deep-sea fishing methods ; (*b*) the co-operative and socio-economic side of the Department's operations, (*c*) inland pisciculture, and (*d*) the experimental and demonstrational fish cannery at Chaliyam in South Malabar. Other Officers have charge respectively of sections dealing with education and industrial work, which include a Training Institute for village teachers, fish-curing yards, and oil and guano factories.

The public fish-curing yards now under the control of the Salt and Abkari Department will eventually pass into the charge of the Fisheries Department ; at present as a trial measure, 6 yards have been transferred and are now being operated directly under the latter Department, with a view to the introduction of better methods, and improved hygiene. Other newly opened yards are also being administered on model lines by the Department. Its activities are so varied and far reaching that it is difficult even to enumerate them in the space available, much less to give details So far its most notable industrial successes have been the reform of manufacturing processes in the fish-oil trade, the creation of a fish-guano industry, the establishment of a fish cannery and the development of canned goods other than sardines, which alone had been canned previously in Malabar, and the opening of an oyster farm conducted under hygienic conditions. (For details see the Bulletins of the Department, issued from the Government Press, Madras ; twelve volumes have been issued to date). All this work has been carried on under serious handicap for want of suitable accommodation for the research staff ; prior to the war proposals were elaborated for headquarters buildings in Madras comprising laboratories, experimental hatcheries, and a large public aquarium ; postponed owing to war conditions these are again under discussion. In Madras the Department controls a small public aquarium, deservedly popular as the first and only one on the Asiatic mainland.

Fishing rights in the large irrigation tanks were transferred from Government to local authorities many years ago ; these tanks are now being reacquired by Government in order that they may be restocked periodically by the Department ; the results so far have shown a profit on the operations. To breed the necessary fry, three fish farms are in operation, and the construction of three more is in progress. In these the chief fish bred are the Gourami, obtained from Java, the Murrel and *Etroplus suratensis*, which has the excellent attribute of thriving and breeding as well in brackish as in fresh water ; all three protect their eggs while developing a useful habit ; both the *Gourami* and *Etroplus* are largely vegetarian in diet. A further activity is represented by the breeding of small fishes specially addicted to feed upon the aquatic larvæ of mosquitoes. These are supplied in thousands to municipalities and other local authorities at a nominal price, for introduction into mosquito-haunted sheets of water; these anti-malarial operations have proved most successful in those places where the local authorities have given proper attention to the directions given. The educational work of the Department is becoming one of its most important branches whether it being specially training teachers for schools in fishing villages, in training men in the technology of curing, canning, and oil manufacture : in co-operative propaganda and in the supply of zoological specimens for the use of college classes and museums. The last named has filled a long-felt want and is contributing materially to the advancement of the study of zoology throughout India ; there is now no need to obtain specimens from Europe.

The development of deep-sea fishing is engaging the attention of Government ; splendid trawl grounds are indicated off Cape Comorin extending over an area of some 4,000 square miles ; other promising areas are known elsewhere, but so far the limiting factors are the lack of cold storage accommodation at any port in the Presidency, and the want of a deep-water harbour in the south, where steam-trawlers can discharge direct into store.

Welfare Work.—A remarkable feature in the work of the Madras Fisheries Department is the energy which it devotes to the improvement of the condition of the fisherfolk. On Sir Frederick Nicholson's initiative the department has always recognized the duty of spreading among them education and the habits of thrift, temperance and co-operation. The work has been specially successful on the west coast. The number of fishermen's co-operative societies last year had risen to 65. The paid-up-capital of these societies amounted to over three quarters

of a lakh of rupees; over 2 lakhs were disbursed by them in loans. These societies it is reported worked satisfactorily, allowance being made for the inexperience and illiteracy of the members. But the formation and working of co-operative societies are not the only social activity among these fishermen. There is a vigorous temperance society at Mangalore. The Collector of South Kanara has granted sites for the construction of village halls for the fishermen in two villages and the fishermen have themselves collected Rs. 3,000 for the building. In another village, Kizhur, the fishermen have already completed a building in which they hold meetings while an elementary school carries on its work in the same building. In Madras itself at Nadukuppam a temperance organisation has got to work with the assistance of the Fisheries Department. To promote the education of fishermen a training institution was opened in the middle of 1918 at Calicut to train teachers to work in elementary schools for the fisherfolk. The pupil teachers under training are familiarized with the work carried on in the fishery stations at Tanur and Chaliyam. They are given practical instructions in fishing, a boat having been purchased for the purpose. By the end of 1920 29 schools for the fisherfolk were being maintained by the department on the west coast with a total of 1,400 pupils. Nine of these were new schools started during the year by the department. In some places the villagers themselves started the schools and then handed them over to the department. In other places schools were opened by the department at the request of the fishermen. Local men are appointed as honorary managers of schools.

Bengal & Bihar & Orissa.

The fishing value of this extensive deltaic region lies primarily in the enormous area occupied by inland waters—rivers, creeks, jheels, and swamps, to say nothing of paddy fields and tanks. These swarm with fish and, as the Hindu population are free to a large extent from the aversion to a fish-diet which is widely prevalent among the better castes in the south the demand for fish is enormous. Rice and fish are indeed the principal mainstays of the population and not less than 80 per cent. of the people consume fish as a regular item of diet. It is calculated that 1·6 per cent. of the population is engaged in fishing and its connected trades, a percentage that rises to 2·6 in the Presidency, Raj Shahi, and Dacca Divisions. 644,000 persons in Bengal subsist by fishing with 324,000 maintained by the sale of fish, and this in spite of the fact that fishing is not considered an honourable profession. As a fresh-water fisherman the Bengali is most ingenious, his traps and other devices exceedingly clever and effective—in many cases too effective—so eager is he for immediate profit, however meagre this may be. The greatest inland fishery is that of the hilsa (*Clupea ilisha*) which annually migrates from the sea in innumerable multitudes to seek spawning grounds far up the branches of the Ganges and the other great rivers. Other valued and abundant fishes are the rohu (*Labeo rohita*) and the katla, (*Catla catla*); prawns abound everywhere. Of important fishes taken in the lower reaches of the rivers and in the great network of creeks spread throughout the Sunderbans, the bekti (*Lates calcarifer*) and the mullets are the most esteemed; apart from these estuarine fish the most valuable sea-fishes are the mango-fishes (*Polynemus,*) pomfrets and soles. The Sea-fisheries are as yet little exploited, the fishermen of Orissa, where alone coastal fishing is of any local importance, having no sea-craft save catamarans of inferior design and construction.

Following the inquiry begun in 1906 by Sir K. G. Gupta, an investigation of the steam trawl potentialities of the head of the Bay of Bengal was undertaken, the trawler *Golden Crown* being employed for the purpose. The results showed that there are extensive areas suitable for trawling and capable of yielding large quantities of high class fish. Much attention was devoted during these trawl cruises to the acquisition of increased knowledge of the marine fauna, the results being published in the Records and Memoirs of the Indian Museum. For various reasons, the chief perhaps being the hostility of vested interests, the lack of cold storage facilities and the loss of time involved by the trawler having to bring her catches to Calcutta instead of sending them by a swift tender, the experiment was financially a failure and was dropped. With ever-increasing demand for fish in Calcutta and the concurrent rise in prices, the prospects of remunerative steam-trawling are now much more promising and there seems a prospect of one or more steam trawling companies being floated in the immediate future. The trade is a difficult one to organize and without a rare combination of technical fishery knowledge and far sighted and comprehensive organization the danger run by the investing public will be considerable. Originally one Fisheries Department served the needs of the two provinces of Bengal and Bihar and Orissa. Separation was effected recently and at the present time fisheries in Bengal are administered temporarily by the Department of Agriculture, whereas in Bihar and Orissa, they form a section of the Department of Industries.

The Bengal Fisheries Department has of necessity a more limited scope for its activities than in the case of Madras. Practically no coastal minor industries exist, neither do the natural conditions lead us to suppose that any can be created without extreme difficulty, and in the absence of a great trawl industry which alone might be able to call into existence factories devoted to the utilization of fish by-products. Apart from this, much can be done by its officers for the uplift of the general fishing population with a view to free them from the tyranny of the mahajans (fish contractors and middlemen) and enable them to put more capital into their business and to conduct it co-operatively. This is necessarily extremely slow work, but the Department has made a beginning and once a few societies can be made successful, the news of the benefits conferred on the members will constitute the best possible form of propaganda. With the advent of the Reforms, fresh life has been infused into the Department and proposals are under consideration for a thorough-going reorganisation, having for its main object an intensive development of the great potentialities of the inland and estuarine

fisheries, which constitute the true fishery wealth of Bengal. Among these are included the establishment of a biological station where the life-histories of food fishes will be studied, the introduction of improved fishing methods and of new species of fish superior to the indigenous under certain conditions, the erection of an experimental cannery, etc.

Fresh-water murrels are used extensively at Dacca in the manufacture of cheap pearl buttons. The Dacca bangle factories carry on an important local industry of very ancient standing; their material is almost entirely obtained from the South Indian and Ceylon chank fisheries already alluded to.

Bombay.

Whereas Bengal's fisheries are at present confined principally to inland waters, those of Bombay are concerned, save in Sind, almost entirely with the exploitation of the wealth of the sea. Bombay is favoured with a coast line abounding with excellent harbours for fishing craft, a fair-weather season lasting for some seven months, and a fishing population more alive to their opportunities and more daring than those of the sister Presidencies. Bombay sea-fisheries are of very great importance financially as well as economically and, though there is less necessity for a special department to develop marine industries, there is ample scope for most useful work in improving curing methods, in introducing canning, and in the development of minor marine industries particularly those connected with the utilization of bye products. With this end in view the recent Director of Industries, Mr. P. J Meade, C.I.E., I.C.S., obtained the sanction of Government to include 'Fisheries' within his purview, and there are now two officers in the Department engaged upon fishery investigation and development. A steam trawler was bought for work in Bombay waters in 1920 and began work in May 1921 off Bombay. Up to the present the results have not come up to expectations, but till a full year has elapsed, it would be premature to consider the enterprise a failure. A private syndicate which began work a month earlier than the Government experiment has had better results but this has been attained only by exploiting grounds at a long steaming distance from Bombay.

The more important sea-fish are pomfrets, soles and sea-perches among which are included the valuable Jew-fishes (*Sciæna* spp) often attaining a very large size and notable as the chief source of "fish-maws" or "sounds," largely exported from Bombay for eventual manufacture into isinglass. The finest of Bombay fishing boats hail from the coast between Bassein and Surat. These boats are beautifully constructed, attain a considerable size, and are capable of keeping the sea for weeks together. In the season they fish principally off the Kutch and Kathiawar coasts and in the mouth of the Gulf of Cambay. Their main method of fishing is by means of huge anchored stow nets, which are left down for several hours and hauled at the turn of the tide. The chief catches are bombil (Bombay ducks), pomfrets and jew-fishes. The first named are dried in the sun after being strung through the mouth upon lines stretched between upright posts. South of Bombay the fishermen of Ratnagiri and Rajpur make use of another and lighter class of fishing boat specially designed for use in drift-net fishing. Fine hauls of bonito, seer (a large form of mackerel) and allied fishes are often made during the season from September to January and later of shark and rayfish. For the latter specially large and powerful nets are employed For part of the fair season when fishing is not usually remunerative many of the larger Bombay fishing boats are employed as small coasters a fact which shows how large they run in size.

In **Sind** considerable sea-fishing is carried on in the neighbourhood of Karachi chiefly for large and coarse fish, as shark, rays and jewfishes The edible oyster trade of Karachi was once extensive, the creeks of the Indus producing a species of oyster superior to that found in Bombay and Madras backwaters and estuaries. Unrestricted exploitation of beds of limited extent inflicted great harm, and now, when various salutary restrictions are imposed, the beds are slow to respond. Occasionally large deposits of the window pane oyster (*Placuna placenta*) are found in the Indus creeks and as these produce seed pearls in abundance, Government leased the beds to the highest bidder. The pearls are largely exported to China for use in medicine Considerable fisheries exist in the River Indus, chiefly for the fish known as palla, which are annually leased out by Government for about Rs. 20,000.

In the Gulf of Kutch two pearl fisheries exist, one for the true pearl oyster, the other for the window-pane oyster. The former is carried on by His Highness the Maharaja of Jamnagar, the other partly by this Prince and partly by the administration of His Highness the Maharaja Gaekwar of Baroda. The latter industry owes its local existence to the enterprise of the Baroda Government which in 1905 obtained the services on deputation of Mr. J. Hornell, now Director of Fisheries in Madras, for the purpose of examining the Marine potentialities of the Baroda territory in Kathiawar. One of the consequences was the discovery of large deposits of pearl-bearing window-pane oysters, until then unknown; of late years these beds have produced annually from Rs. 15,000 to Rs. 25,000 in revenue, perhaps the best example we have in India of the profitable nature of well-directed scientific enquiry into fishery problems, The Baroda Government, continuing their enlightened interest in the fishery developments, have had two officers trained in the Madras Fisheries Department and now employ them in development work on the Baroda coast.

Experiments in canning are now in progress at one of the chief fishing centres on the Southern Kathiawar coast and already promise considerable success particularly with regard to pomfrets.

Burma.

As with Bengal, the main fisheries of Burma are those in inland waters. From time immemorial the exclusive right of fishing in certain classes of inland waters has belonged to the Government, and this right has been perpetuated in various fishery enactments, the latest of which is the Burma Fisheries Act of 1905. Fishing is also carried on along the coast, but the sea fisheries absorb but a small portion of industry. Most of the fishermen labour in the stream

and pools, which abound particularly in the Delta Districts. The right to work these fisheries, mentioned in the enactments alluded to above, is usually sold at auction, and productive inland waters of this kind often fetch very considerable sums. River fishing is largely carried on by means of nets, and generally yields revenue in the shape of licence fees for each net or other fishing implement used. Here and there along the coast are turtle banks which yield a profit to Government. In the extreme south the waters of the Mergui Archipelago afford a rich harvest of fish and prawns, mother-of-pearl shells and their substitutes, green snails and trochas, shark-fins, fish-maws, and beche-de-mer Pearling with diving apparatus was introduced by Australians with Filipino and Japanese divers in 1893. They worked mainly for the shell, it being impossible for them to keep an effective check on the divers as regards the pearls. After about five years, when the yield of shell had decreased, they all left. The industry was then carried on by the Burmese.

In 1918, the Burma Government deputed one of their civilians to study the methods of fishery development found successful in Madras. His report and recommendations are now before Government. From what is known of fishery conditions in Burma, the coastal fisheries appear more backward and undeveloped than anywhere else in India. This is due partly to the fact that the Burman is a poor sailor, and partly to the ease with which the population can earn a fair living by agriculture and other less hazardous and more profitable callings The stress of population has not yet been felt in Burma.

The Punjab.

A Punjab Fisheries Department came into being as an experimental measure in 1912 and received the official sanction of Government as a regular department of the Punjab in April 1916. It operates under a Warden of Fisheries, under control of the Financial Commissioner. During the first three years the Department was almost entirely concerned with preliminary work, consisting largely of investigations and experiments in the Beas and Ravi Rivers.

These rivers were examined with a view to ascertain the indigenous species which inhabited them, their habits, spawning grounds and other data which would enable Government to frame regulations for their protection. The various fishing communities were interviewed and their views and statements carefully considered as to their rights in Government waters. Rules based upon the evidence when collated were subsequently drafted and approved by Government for the regulation of fishing in various districts, and are said to be working smoothly and satisfactorily. Those for each district take account of special local conditions, with a view both to conserve the fish supply and to secure a reasonable revenue to Government.

Trout culture flourishes in the hill streams, good sport being enjoyed by anglers in the Kulu Valley where operations were first initiated. The Kangra streams are now receiving attention, various consignments of ova having been sent there, successfully hatched out, and turned into suitable waters.

Travancore.

This State has affiliated Fisheries to the Department of Agriculture and with the help of two officers trained in Madras, the Department has already accomplished a notable amount of development work Special attention has been given to the regulation of fisheries in backwaters, to the establishment of co-operative societies among the fishing community and to the introduction of improved methods of sardine oil and guano production. Useful work has been done by one of the Officers in elucidating the life-histories of the more valuable food fishes and prawns.

The Opium Trade.

Two descriptions of opium must be distinguished. *Bengal* opium which is manufactured from poppy grown in the United Provinces; and *Malwa* opium which is almost entirely produced in certain Native States in Central India and Rajputana.

Bengal Opium.—Cultivation of poppy is only permitted under license. The cultivator to whom advances are made by Government free of interest is required to sell the whole of his production to the Opium Factory at Ghazipur at a rate fixed by Government, now Rs. 7/8 per seer of 70° consistency. The area licensed for cultivation has in recent years been much reduced as a consequence of the agreement between the Government of India and the Chinese Government, and is now restricted to the United Provinces. The following are the figures of the area under cultivation and of production in 1917-18: Bighas cultivated, 331,216; Gross produce in Maunds, 32,321; number of chests manufactured, 25,146. At the Factory two classes of opium are manufactured:

(1) "Provision" opium intended for export to foreign countries. This opium is made up in balls or cakes, each weighing 3·5 lbs., 70 cakes weighing 140½ lbs. being packed in a chest.

(2) "Excise" opium intended for consumption in British India. This is made up in cubic packets, each weighing one seer, 60 packets being packed in one chest. It is of higher consistency than "provision" opium.

"Provision" opium is sold by public auction in Calcutta, the quantity to be sold being fixed by Government. This quantity has been reduced in recent years in accordance with the agreement with China, the figures being 15,440 chests in 1911 and 6,700 chests in 1912. Exports to China have been stopped altogether since 1913.

Malwa Opium.—The poppy from which Malwa opium is manufactured is grown chiefly in the Native States of Indore, Gwalior, Bhopal, Jaora, Dhar, Rutlam, Mewar and Kotah. The British Government has no concern with the cultivation of the poppy, or the manufacture of the opium: but it used to regulate, before exports to China were stopped, the import of Malwa opium into, and the transport through, its territories. As the chief market for Malwa opium was China, and as the States in which the drug is produced had no access to the sea, except through British territory, the British Government were able to impose a duty on the importation of the drug on its way to Bombay for exportation by sea.

No statistics of cultivation or production are available. The poppy is sown in November, the plants flower in February, and by the end of March the whole of the opium has been collected by the cultivators who sell the raw opium to the village bankers. It is then bought up by the large dealers who make it up into balls of about twelve ounces and store it until it is ready for export, usually in September or October. The opium is of 90° to 95° consistency and is packed in half chests: considerable dryage took place in the case of new opium while transported to Bombay.

Sales of Malwa opium for export to China have ceased since January 1913 and the trade has become extinct since 17th December of that year when the last shipment was made. Practically the whole of the Malwa opium exported from Bombay went to China. There is no market for it in the Straits Settlements. A few chests annually are shipped to Zanzibar.

Revenue.—The revenue derived by the Government of India from opium in recent years is as follows:—

	£
1915–16	1,913,514
1916–17	3,160,005
1917–18	3,078,903
1918–19	3,229,000
1919–20	2,088,000
1920–21 (Budget Estimate) ..	1,775,200

Agreement with China.—The fluctuations in the revenue derived from opium are directly attributable to the trade conditions arising out of the limitation of opium exports. In 1907 being satisfied of the genuineness of the efforts of the Chinese Government to suppress the habit of consuming opium in China, the Government of India agreed to co-operate by gradually restricting the amount of opium exported from India to China. In 1908 an arrangement was concluded by which the total quantity of opium exported from India was to be reduced annually by 5,100 chests from an assumed standard of 67,000 chests. Under a further agreement, signed in May 1911, the cessation of the trade was to be accelerated on evidence being shown of the suppression of the native production of opium in China, and in accordance with this agreement a further limitation was placed on exports to Chinese ports. The reduction of exports led to an increase in the price of the drug in China and a corresponding rise in the price obtained in India at the auction sales. For some considerable time, however, in 1912 the trade in China was paralysed by the imposition by Provincial Governors in defiance of instructions from the Central Government of restrictions on the importation and sale of Indian opium. Stocks accumulated rapidly at Shanghai and Hongkong and the position in December 1912 had become so acute that a strong and influential demand was made on the Government of India to relieve the situation by the suspension of sales. Sales were accordingly postponed both of Bengal and Malwa opium and in order to afford the Malwa trade the most complete relief, the Government of India undertook to purchase for its own use 11,253 chests of Malwa opium which remained to be exported in 1913. The present position is that the export trade to China has ceased since 1913.

Exports:—The exports of opium on private account increased during the year 1920-21 from 6,247 chests (9,166 cwts.) valued at Rs. 1,96 lakhs to 7,660 chests (11,249 cwt.) worth Rs. 2,52 lakhs They were directed mainly to Java (3,000 chests against 2,000 in 1919-20), Siam (1,700 chests

against 1,400) Indo-China (1,230 chests against 995), Japan (750 chests against 980) and Hongkong (431 chests against 369). Prices fell considerably, those of Benares opium ranging between Rs. 5,000 and 6,000 and of Bihar between Rs. 4,800 and 5,800. There were 3,167 chests (6,581 cwts. valued at Rs. 94 lakhs), shipped on government account direct to the Governments of Hongkong and the Straits. The agreement for the supply of opium to the Government of Hongkong was renewed for five years from January 1921.

GLASS AND GLASSWARE.

The total value of the glass and glassware imported into India in 1920-21 showed an increase being valued at Rs. 338 lakhs, compared with Rs. 199 lakhs in the previous year. The imports of glassware in India are showing an upward tendency, they being in 1913-14 over Rs. 190 lakhs in value, *i.e.* over the quinquennial average of Rs. 161 lakhs. Austria Hungary and Germany before the outbreak of the war exported bangles, beads, bottles, funnels, chimneys and globes, etc., to the value of Rs.116 lakhs in 1913-14. The value of average imports from the enemy countries during the five pre-war years was Rs. 93 lakhs or about 57% of the trade. With their disappearance from the Indian market, imports from Japan increased to 71% from 8%, the pre-war average. United Kingdom increased her shipments of sheet and plate glass, which before 1914 came largely from Belgium. Japan, however, could not meet the Indian demand, and hence renewed and pioneer efforts were made in India to satisfy the needs of the Indian consumer After the war imports from what was the Dual Monarchy quickly revised. The trade returns for 1920-21 show imports of glass and glassware from "Austria-Hungary" valued at £433,000 compared with £583,000 in 1913-14.

Manufacture of Glass in India.—Glass was manufactured in India in centuries before Christ and Pliny makes mention of "Indian Glass" as being of superior quality. As a result of recent archæological explorations, a number of small crude glass vessels have been discovered indicative of the very primitive stage of the Industry. But no further traces of ancient Indian Glass Industry as such survive; yet, it is certain that by the sixteenth century it was an established Industry producing mainly bangles and small bottles. The quality of the material was inferior and the articles turned out were rough. Beyond this stage, the industry had not progressed until the nineties of the last century. Manufacture of glass in India on modern European lines dates from the nineties of the last Century, when some pioneer efforts were made in this line. Since then a number of concerns have been started, a number of them have failed, while some are still clinging to life owing to war conditions. They mainly devote themselves to the manufacture of bangles and lampware side by side with bottle-making on a small scale. This, therefore, is the criterion which determines the two well-defined classes of the Industry in its present stage, (i) indigenous Cottage Industry and (ii) the modern Factory Industry;

(i) The indigenous Cottage Industry which is represented in all parts of the country, but has its chief centres in Firozabad District of U. P., and Belgaum District, in the South, is mainly concerned with the manufacture of cheap bangles made from "glass cakes or blocks" made in larger Factories. The industry is at present in a flourishing state and supplies nearly one-third of the Indian demand for bangles. The quality has been improved by the discovery of new glazing processes and for the present the turnover in this line has gone up to 20 lakhs of rupees a year. But these bangles have now to face a very hard competition from Japan whose "silky" bangles are ousting the old-type Indian ones.

(ii) The modern Factory type of organization of this Industry is just in its infancy at present. The existing Factories either stop at producing glass cakes for bangle as in Firozabad or simple kind of lampwares and bottles. With the existing state of knowledge and machinery in India they can neither produce sheet and plate glass, nor do they pretend to manufacture laboratory or table glass. Artistic glassware is out of question and the private capitalists who have to run their concerns mostly with commercial ends do not think worth their while to spend money and labour on it. War caused a great decrease in volume—though not so much in value which was much increased—of the imports of the lampware, etc., and in order to meet the Indian demand for them, new Factories were started and old revived, which produced only cheap and simple kind of lampware and bottles on small scale. The total production of these Indian Glass Works has not been exactly estimated, but it is generally supposed that they were able to meet in these war years nearly half the Indian demand for this kind of glassware. There are at present 14 Factories engaged in the production of lampware, of which two or three only produce bottles and carboys also. The chief centres for the former kind are Bombay, Jubbulpore, Allahabad, and Bijhol and Ambala; while bottles are only manufactured at Naini and Lahore, and recently at Calcutta.

During the latter years of the war period, a number of Glass Works were opened in the Bombay Presidency and adjoining districts, local manufacture having been stimulated by the cessation of imports of German, Austrian and Belgian glass.

Causes of failure.—Records of the earlier ventures have shown that the failures in some cases were due in part at least to preventible causes, prominent among which were (1) Lack of enlightened management; (2) Lack of proper commercial basis, as in some cases the proprietors had a number of other more larger concerns to look to. (3) Bad selection of site. An ideal site for a Glass Factory would be determined by the (*a*) nearness of quartz and fire-clay, (*b*) nearness of fuel, and (*c*) by the nearness of market. At least two must be present. In some concerns, two were absent. (4) Specialisation was lacking, some factories in their initial stages trying to manufacture three or four different kinds of glassware simultaneously like lampware, bottles, and bangles, etc. (5) Paucity of suffici-

ent fluid capital for initial expenses for machinery or other improvements or even in some cases for running the concern in the beginning.

But beyond these there are certain real and special causes that contributed to the failure of some of these and hinder the progress of the rest. Chief among them are (1) The Industry is in its infant stage and hence such failures are but incidental. (2) No expert guidance in this line, there is a lack of men and good literature. (3) Paucity of skilled labour of higher type. The present Indian workmen in this line and blowers are few in number and illiterate. They, therefore, master the situation and are unamendable to management. (4) Heavy cost of good fuel, the works usually being situated where good sand and quartz can be obtained, and consequently, in most cases, at a great distance from the coal-fields. (5) To a certain extent competition from Japan and other European countries.

Alkali used is almost entirely of English manufacture being Carbonate of Soda 98-99% in a powdered form. This Alkali has almost completely taken place of the various Alkaline Earths formerly employed by the Glass Bangle manufactures as the latter cannot be used in the manufacture of glass which is to compete with the imported article. These points must be carefully noted for future guidance.

The Industry has developed considerably under war conditions, but in peace times, in this transition stage, immediate efforts must be made in the direction of what the Indian Industrial Commission say in their Report (Appendix E), *viz.*: "The Glass Industry, even in its simplest form is highly technical and can be efficiently carried on only by scientifically trained managers and expert workmen. The present stage has been reached by importing men, only partially equipped with the necessary qualifications, from Europe and Japan, and by sending Indian students abroad to pick up what knowledge they can. The glass industry is a closed trade and its secrets are carefully guarded, so that the latter method has not proved conspicuously successful."

BIBLIOGRAPHY.—Indian Industries Commission Report (Appendix); Indian Munitions Board, Industrial Handbook, etc.

WILD BIRDS' PLUMAGE.

The Bill for prohibiting the importation into England of wild birds' plumage, which was introduced into Parliament in 1913, was the occasion of a fierce controversy on the nature of the plumage trade. Organised opposition to the Bill, although successful in preventing it from becoming law, failed to convince the public that the plumage trade was not one of great cruelty. The controversy continued with unabated vigour until May 1921, when an agreement was arrived at between the two parties. The most important clause in the agreement stipulates that within four months of the Bill becoming law an Advisory Committee shall be appointed by the Board of Trade. This Committee will consist of an independent chairman, two expert ornithologists, three representatives of the feather trade, and four other independent members. The function of this Committee will be to advise the Board of Trade as to additions to and removals from the existing schedule (ostrich and eider duck) of birds whose plumage may be imported. The passing of the Plumage Bill will thus place England abreast of the United States and of her own daughter Dominions in the suppression of a barbarous industry, as all legitimate methods of breeding birds for their plumage will be safeguarded as definite exceptions under the Plumage Bill.

Plumage birds.—The birds most killed on account of their plumage in India are paddy birds, egrets, kingfishers, bustards, jungle-fowl, pheasants, paroquets, peafowl, hoopoes and rollers. Egrets and rollers (popularly known as Blue Jays) are perhaps the birds which have been most extensively killed in the past, and of these, egrets have attracted the greatest attention. There are three species met with in India; the Large, Smaller and Little Egrets. All three are pure white slim birds which develop during the breeding season a dorsal train of feathers, which elongates and becomes "decomposed" as it is expressed, that is to say, the barbs are separate and distinct from each other, thus forming the ornamental plume or aigrette for which these birds are much sought after and ruthlessly destroyed. Thirty years ago the exports were valued at over six lakhs in one year, but since 1895 the export trade has steadily diminished. But, though legitimate exports have been stopped, the trade is so lucrative as to lead to many attempts at smuggling. Within a recent period of 12 months the Bombay Preventive Department, for example, seized egret plumes worth Rs. 2,19,047 in India and £44,000 in London. The rupee value represents the sum which the exporters paid to those who took the feathers from the birds, so the loss to the trade was considerable. In addition, penalties varying from Rs. 5,000 to Rs. 10,000 each and amounting altogether to Rs 59,175 were inflicted on the ten merchants concerned in attempting to export the feathers. A case was reported from Rangoon in 1916 of a man being found in possession of 22 lbs. of egret feathers valued at Rs 66,000. Although frequently denied, there seems very little reason to doubt, that within the last decade egrets have been successfully bred in captivity by the fishertolk in the province of Sind. But whether such birds can be bred without cruelty, and if so whether the export of their plumage could be legalised without encouraging barbaries in other areas of the peninsula, is a question which can only be decided as a result of a searching and exhaustive inquiry.

Legislation.—Indian legislation on the subject will be studied with interest by those who have followed the course of legislation on this subject in other countries. Until 1887 no legislation was considered necessary in India. An Act of that year enabled local governments and municipal and cantonment authorities to make rules prohibiting under penalties the sale or possession of wild birds recently killed or taken during their breeding seasons, and the importation into any municipal or cantonment area of the plumage of any wild birds during

those seasons; and local governments were empowered to apply these provisions to animals other than birds.

Afterwards, in 1902, action was taken under the Sea Customs Act to prohibit the exportation of the skins and feathers of birds, except feathers of ostriches and skins and feathers exported *bona fide* as specimens illustrative of natural history. Act VIII of 1912 goes much further than the previous law. It schedules a list of wild birds and animals to which the Act is to apply in the first instance, enables local governments to extend this list, empowers local governments to establish "close times," presumably during the breeding seasons, in the whole of their territories or in specified areas, for wild birds and animals to which the Act applies, and imposes penalties for the capture, sale, and purchase of birds and animals in contravention of the "close time" regulations, and for the sale, purchase and possession of plumage taken from birds during the close time. There is power to grant exemptions in the interests of scientific research, and there are savings for the capture or killing by any person of a wild animal in defence of himself or of any other person, and for the capture or killing of any wild bird or animal in *bona fide* defence of property.

One defect in the law may be noticed. When an exporter is discovered, the Customs Department can on a magistrate's warrant have his house searched and seize the feathers found there to produce as evidence that he is engaged in the trade But they have to return the feathers and can only take possession of them if they are discovered presently in course of export.

BREWERIES.

Statistics compiled from official returns show that there were, in 1912, 22 **breweries** in British India, of which one did not work during the year. Fifteen of these are private property and seven are owned by six joint-stock companies with a nominal capital of Rs. 26,71,000, of which Rs. 22,26,260 was paid up at the end of 1912-13. Eight of the breweries are located at stations in the Himalayas from Murree to Darjeeling. The largest brewery is the one at Murree, the Bangalore, Solon, Rawalpindi, Kasauli, Poona, and Mandalay, breweries standing next in the order shown. In the pre-war year **production** was 3,651,000 gallons. This figure rose in 1918 to 8,214,000 gallons, but sank after the war, being in 1920 only 5,536,000 gallons.

A substantial quantity of beer produced locally is consumed by the British troops in India In 1907 the Army Commissariat purchased some 38 per cent. of the total production and the average purchases in the five years 1903-1907 amounted to 2,633,616 gallons yearly. From the 1st January, 1908, the contracts with Indian breweries for the supply of malt liquor to British troops have been discontinued, each British regiment being left free to make its own arrangements to obtain the necessary supply, as a result, the figures of Army consumption are no longer readily available.

GRAIN ELEVATORS.

The question of adopting elevators for the handling of Indian grain has engaged attention for some time and has assumed increased importance in the light of the railway congestion experienced in recent years and more particularly in the grain season. In the last three years great strides have been made by other countries in the adoption or perfecting of the elevator system, and a large mass of contemporary data on the subject has been brought together by the Commercial Intelligence Department. Since the subject is one that cannot receive adequate consideration in India till the facts are before the public, these have been embodied in a pamphlet entitled *Indian Wheat and Grain Elevators*, by the late Mr. F. Noel-Paton, Director General of Commercial Intelligence to the Government of India. The work gives full particulars regarding India's production of wheat, and shows that less than one-eighth of the crop is exported. It describes the conditions under which the grain is held and the risks that it runs It is pointed out that the cultivator has no adequate means of preserving his wheat and that he is constrained to sell at harvest time: also that the prices then obtained by him are considerably lower than those usually current in later months. The constant nature of the European demand is explained and an attempt is made to gauge the probability that the enormously increased quantities of wheat to be expected when new irrigation tracts come into bearing would be accepted by Europe at one time and at a good price, or could be economically transported under a system in which a few months of congestion alternated with a longer period of stagnation. Figures are given which suggest that in practice the effect of equipping railways to do this is to intensify the evil and so to engage in a vicious circle. The author explains the structural nature of elevators and their functions as constituted in other countries. Particulars are given as to the laws that govern their operations in such countries.

TRADE MARKS.

The **Indian Merchandise Marks Act** (IV of 1889) was passed in 1889, but its operation in the earlier years was restricted, especially in Calcutta, in consequence of the lack of adequate Customs machinery for the examination of goods. In 1894, with the introduction of the present tariff, the Customs staff was strengthened for the examination of goods for assessment to duty, and this increase enabled examination to be made at the same time for the purposes of the Merchandise Marks Act. The Act was intended originally to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). While the Act was before the Legislature a provision was added to require that piece-goods should be stamped with their length in yards. In this respect these goods are an exception, for the Act does not require that other descriptions of goods should be stamped or marked, though it requires that when goods are marked the marks must be a correct description. **The number of detentions** under the Act during the twenty years ending 1912-13 has been :—

Average of the five years ending	.. .. ..	1897-98 1,386
" " " " "	..	1902-03 1,411
" " " " "	..	1907-08 1,198
" " " " "	..	1912-13 1.960

Detention is but rarely followed by confiscation, and there have been only 109 such cases during the stated twenty years. Usually, detained goods are released with a fine, and this procedure was followed in 19,282 cases out of the 29,774 detentions ordered in the same period. In 10,364 cases the detained goods were released without the infliction of a fine. In this period of twenty years 42 per cent. of the detentions were on account of the application of false trade marks or false trade descriptions. In 36 per cent. of the cases detention was ordered because the country of origin was either not stated or was falsely stated, and in 21 per cent. because the provisions of the Act for the stamping of piece-goods had been infringed.

HIDES, SKINS AND LEATHER.

India's local manufactures of skins and leather have steadily increased in recent years. Previous to the outbreak of war, the trade in raw hides in this country was good ; there was a large demand for hides, and prices ruled high. While in the continental markets stocks were high owing to overtrading in the previous year, the United States had a shortage which was estimated at approximately two million pieces. On the declaration of war, the trade which had up till then been brisk was seriously dislocated. Exports to enemy countries, especially to the great emporium of Indian hides, Hamburg, were stopped, and exporters had to find new markets for the raw material. The raw hide business of India, it is well known, has hitherto been largely, if not quite entirely, in the hands of German firms or firms of German origin. Germany has had the largest share of India's raw hides. In the four months before the outbreak of war she took 39 per cent. of the total exports. In 1912-13 she took 32 per cent. and in 1913-14, 35 per cent. Raw hides were exported to Trieste in considerable quantities whence they were taken to Germany or Austria. In the four months before the outbreak of war 15 per cent. of India's exports passed through Trieste ; in 1913-14 the percentage was 21.

Exports.—Owing to the removal of the embargo, exports rose in 1919-20 to Rs. 36 crores as compared with Rs. 19 crores in the previous year. But in 1920-21 this trade suffered heavily from the slump in foreign markets. Exports of raw hides and skins fell from Rs. 2,341 lakhs in 1919-20 to Rs. 525 lakhs and of tanned or dressed hides and skins from Rs. 1,255 lakhs to Rs. 317 lakhs. In March 1921 the Legislative assembly considered the desirability of removing the export duty of 15 per cent. *ad valorem* (including two-thirds rebate to tanners within the empire) but desisted in view of the financial position of the Government.

Conditions of the Trade.—The trade in hides and skins and the craft in leather manufacture are in the hands either of Mahomedans or of low caste Hindus and are on that account participated in by a comparatively small community. The traffic is subject to considerable fluctuations concomitant with the vicissitudes of the seasons. In famine years for instance the exports of untanned hides rise to an abnormal figure. The traffic is also peculiarly affected by the difficulty of obtaining capital and by the religious objection which assigns it to a position of degradation and neglect : it has thus become a monopoly within a restricted community and suffers from the loss of competition and popular interest and favour.

No large industry has changed more rapidly and completely than that of leather. By the **chrome process**, for example, superior leather may be produced from the strongest buffalo hides in seven days, from cowhide in twenty-four hours, and from sheep and goat skins in six to eight hours ; and these operations formerly took thirty days or as much as eighteen months. Of these changes the native tanners of India were slow to take advantage, but in spite of general backwardness the leather produced by some of the tanneries, especially those under European management, is in certain respects equal to the best imported articles. But since the outbreak of war progress has been more rapid and considerable quantities of special forms of chrome leather, for which Indian hides are particularly suitable, have found a ready market in London.

Protecting the industry.—The report of the Industrial Commission pointed out that the principal difficulty at present in the hides and leather industry was the lack of organisation and expert skill. Government action to foster the industry was first taken in September 1919, when a Bill was introduced in the Imperial Legislative Council further to amend the Indian

Tariff Act, 1894. The effect of this Bill was officially described as follows: "It is to impose an export duty of 15 per cent on hides and skins with a rebate of 10 per cen on hides and skins exported to other parts of the Empire, and there tanned. Its object is to ensure that our hides and skins shall be converted into fully tanned leather or articles of leather so far as possible in India and failing this in other parts of the Empire, instead of being exported in a raw state for manufacture in foreign countries." Sir George Barnes who was in charge of the Bill and described the tanning industry as one of the most promising Indian industries explained that "the present position is that we have in India at the present time some hundreds of tanneries for the tanning of hides, a large number of which have come into existence in order to satisfy military requirements during the war. We have in fact the foundations of a flourishing tanning industry, but there is reason to fear that it may tend to dwindle and disappear with the diminution of military requirements, if some other support is not given. We want to keep this industry alive, and we believe that in this case protection in the shape of a 15 per cent. export duty is justifyable and ought to be effective. It is clearly just also that the same measure of protection should be extended to the tanners of skins whose business, as I have already stated, was injured by the necessities of the war. Though Indian tanneries have enormously increased in number during the past three years, they can only deal with a comparatively small proportion of the raw hides and skins which India produces, and it is to the advantage of India and the security of the Empire generally that this large surplus should, so far as possible, be tanned within the Empire, and with this end in view the Bill proposes a 10 per cent rebate in respect of hides and skins exported to any place within the Empire. I should add that it is proposed to limit by notification the benefit of this rebate to hides and skins actually tanned within the Empire; and Indian hides and skins re-exported from an Empire port for the purpose of being tanned abroad will not be entitled to any rebate."

Indigenous methods.—India possesses a large selection of excellent tanning materials such as Acacia pods and bark, Indian sumach; the Tanner's cassia, Mangroves, and Myrabolans. By these and such like materials and by various methods and contrivances, hides and skins are extensively cured and tanned and the leather worked up in response to an immense, though purely local, demand.

INVENTIONS AND DESIGNS.

A handbook to the **Patent Office** in India, which was published in 1916 by the Government Press, Calcutta, gives the various Acts, rules, and instructions bearing on the subject together with hints for the preparation of specifications and drawings, hints for searchers and other valuable information that has not hitherto been readily accessible to the general public in so convenient a form. In the preface Mr H. G. Graves, Controller of Patents and Designs, explains the scope of the Patent laws in India and indicates wherein they differ from English law and procedure.

The foundation of patent legislation throughout the world lies in the English "Statute of Monopolies" which was enacted in 1623, the 21st year of King James the First. In part this Act has been repealed, but the extant portion of the more important section 6 is as follows:—"Provided also that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under, hereafter to be made of the sole working or making of any manner of new manufactures within this realm to the true and first inventor and inventors of such manufactures, which others at the time of making of such letters patent and grants shall not use, so as also they be not contrary to the law nor mischievous to the State by raising prices of commodities at home, or hurt of trade, or generally inconvenient; the said fourteen years to be accomplished from the date of the first letters patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be if this Act had never been made, and of none other."

The **existing Indian patent law** is contained in the Indian Patents and Designs Act, 1911, supplemented by the Indian Patents and Designs (Temporary Rules) Act, 1915, and by the Rules made under those Acts. The Patent Office does not deal with trade marks or with copyright generally in books, pictures, music and other matters which fall under the Indian Copyright Act III of 1914. There is, in fact, no provision of law in British India for the registration of Trade Marks which are protected under the Merchandise Marks Act (IV of 1889) which forms Chapter XVIII of the Indian Penal Code.

On the whole, Indian law and procedure closely follow that in the United Kingdom for the protection of inventions and the registration of designs, as they always have done in matters of major interest. One main difference exists, however, as owing to the absence of provision of law for the **registration of trade marks**, India cannot become a party to the International Convention under which certain rights of priority are obtainable in other countries.

The first Indian Act for granting exclusive privileges to inventors was passed in 1856, after an agitation that had been carried on fitfully for some twenty years. Difficulties arising from an uncertainty as to the effect of the Royal Prerogative prevented earlier action, and, owing to some informalities the Act itself was repealed in the following year. In 1859 it was re-enacted with modifications, and in 1872 the Patterns and Designs Protection Act was passed. The protection of Inventions Act of 1883, dealing with exhibitions, followed, and then the Inventions and Designs Act of 1888 All these are now replaced by the present Act of 1911.

The existing Acts extend to the whole of British India, including British Baluchistan and the Santhal Parganas. This of course includes Burma, but it does not embrace the Native States. Of the latter three, *viz.*, (1) Hyderabad (Deccan), (2) Mysore, (3) Gwalior have ordinances of their own, for which particulars must

be obtained from the Government of the States in question as they are not administered by the Indian Patent Office in Calcutta. The object of the Act of 1911 was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." The provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The **annual report** of the Indian Patents Office for the Calendar year 1920 states that during the year there were 1,336 applications for patents as compared with 1,038 in 1919. Four hundred and thirty-four patents which were not accepted within 15 months from the date of application were declared void under Section V (4) of the Indian Patents and Designs Act, 1911. In these cases no specifications were printed. Thirty-two patents which were not accepted within 12 months from the date of application are still open for consideration. The number of patents accepted totalled 297. All these applications were made before July 1, 1919. Specifications have been printed but patents have not been sealed thereon. There were 83 cases in which the patents had been previously notified as void or lapsed which were revived during the year. Oppositions were filed to the grant of patents to the number of 44. Thirty-five of these patents succeeded in obtaining seals, in ten cases no patent was allowed, in three cases opposition was disallowed but the patent was not sealed, in one case the opposition was not pursued but the patent was not sealed, in two cases opposition was partly allowed, in two other cases opposition was overruled, and the remaining case is pending.

During the year entries were made on the register of patents affecting the right of the original patentees in regard to 250 patents. These figures are revealed in a table which forms one of the most interesting features of the journal under review, as the year of application, the name of the original patentee, and the name of the person claiming rights, are all set out. These patents were alive on the 31st December 1920. Twenty-seven applications which were held in suspense have now been sealed, subject to such limitations as may be prescribed in accordance with the Treaty of Peace with Germany.

On the 31st December 1920 there were 866 patents maintained in force which had been sealed before 1917. New lease of life was secured by the payment of continuance fees. In order that a patent or exclusive privilege may remain in force annual fees of Rs. 50 are payable before the expiry of the 4th, 5th, 6th, 7th and 8th years, followed by annual fees of Rs. 100 before the expiry of the 9th, 10th, 11th, 12th and 13th years. If by inadvertence or otherwise, the fee has not been paid within the prescribed time, an extension of one, two or three months may be procured on payment of Rs. 10, 25 or 50, respectively.

Printed Specification of applications for patents, which have been accepted (8 annas per copy), may be seen free of charge, together with other publications of the Patent Office at the following places:—

AHMEDABAD	R. C. Technical Institute.
ALLAHABAD	Public Library.
BANGALORE	Indian Institute of Science.
BARODA.	Office of the State Director of Commerce and Industry.
BOMBAY	Record Office.
"	Victoria Jubilee Technical Institute, Byculla.
"	The Bombay Textile and Engineering Association, No. 1A, Sussex Road, Parel.
CALCUTTA	Patent Office, No. 1, Council House Street.
"	Civil Engineering College, Sibpur.
CAWNPORE	Office of the Director of Industries, United Provinces.
CHINSURAH	Office of the Commissioner, Burdwan Division.
CHITTAGONG	Office of the Commissioner, Chittagong Division.
DACCA	Office of the District Board, Dacca.
DELHI	Office of the Deputy Commissioner.
HYDERABAD	Revenue Department of His Highness the Nizam's Government.
JALPAIGURI	Office of the Commissioner, Rajshahi Division
KARACHI	Office of the City Deputy Collector.
LAHORE	Punjab Public Library.
LONDON	The Patent Office, 25, Southampton Buildings, W. C.
MADRAS	Record Office, Egmore.
"	College of Engineering.
MYSORE	Office of the Secretary to Government, General and Revenue Department.
NAGPUR	Victoria Technical Institute.
POONA	College of Engineering.
RANGOON	Office of the Revenue Secretary, Government of Burma.
ROORKEE	Thomas College.
SHOLAPUR	Office of the Collector.

PUBLICATIONS on sale at the Patent Office :—

	Price R. a.
Patent Office Handbook (Acts, Rules and Instructions)	1 0
The Indian Patents and Designs Act, II of 1911	0 10
The Indian Patents and Designs Act, II of 1911 (Urdu and Hindi) .. each	0 2
The Indian Patents and Designs Rules, 1912	0 2
Weekly Notifications (Extract from the *Gazette of India*)	0 1
Annual Subscription with postage ..	3 0
Inventions (Consolidated Subject Matter Index, 1900—1908, and Chronological lists, 1900—1901) ..	2 0
Inventions (Consolidated Subject Matter Index, 1900—1911, and Chronological lists, 1905—1911) ..	3 0
	each.
Patent Office Journal(issued quarterly)	,, 0 8
Patent Office Journals, 1914, 1915, 1916, 1917, 1918, 1919, 1920	,, 1 0
Printed Specifications of Inventions since 1912	,, 0 8

COPYRIGHT.

There is no provision of law in British India for the registration of Copyright. Protection for Copyright accrues under the Indian Copyright Act under which there is now no registration of rights, but the printer has to supply copies of these work as stated in that Act and in the Printing Presses and Books, Act XXV of 1867. The Indian Copyright Act made such modifications in the Imperial Copyright Act of 1911 as appeared to be desirable for adapting its provisions to the circumstances of India. The Imperial Act of 1911 was brought into force in India by proclamation in the *Gazette of India* on October 30, 1912. Under s. 27 of that Act there is limited power for the legislature of British possessions to modify or add to the provisions of the Act in its application to the possession, and it is under this power that the Indian Act of 1914 was passed. The portions of the Imperial Act applicable to British are scheduled to the Indian Act. The Act to which these provisions are scheduled makes some formal adaptations of them to Indian law and procedure, and some material modifications of them in their application to translations and musical compositions. In the case of works first published in British India the sole right to produce, reproduce, perform or publish a translation is, subject to an important proviso, to subsist only for ten years from the first publication of the work. The provisions of the Act as to mechanical instruments for producing musical sounds were found unsuitable to Indian conditions. "The majority of Indian melodies," it was explained in Council, "have not been published, *i.e.*, written in staff notation, except through the medium of the phonograph. It is possible in many cases to identify the original composer or author, and the melodies are subject to great variety of notation and tune. To meet these conditions s. 5 of the Indian Act follows the English Musical Copyright Act of 1902 by defining **musical work** as meaning any combination of melody and harmony, or either of them, printed, reduced to writing, or otherwise graphically produced or reproduced."

Coinage, Weights and Measures.

As the currency of India is based upon the rupee, statements with regard to money are generally expressed in rupees, nor has it been found possible in all cases to add a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £, and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000=£100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise the exchange value of the rupee to 1s. 4d., and then introduce a gold standard at the rate of Rs. 15=£1. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1s. 4d., and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000=£100—⅓=(about) £67.

Notation.—Another matter in connection with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A **lakh** is one hundred thousand (written out as 1,00,000), and a **crore** is one hundred lakh or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899, while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Coinage.—Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both Natives and Europeans. The anna was formerly reckoned as 1½d., it may now be considered as exactly corresponding to 1d. The anna is again sub-divided into 12 pies.

Weights.—The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras and Bombay, may be thus expressed one maund 40 seers, one seer=16 chittaks or 80 tolas. The actual weight of a seer varies greatly from district to district, and even from village to village, but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. The standard is used in official reports.

Retail.—For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change what varies is not the amount of money to be paid for the same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumption that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d., 1 seer per rupee=(about) 3 lb. for 2s., 2 seers per rupee=(about) 6 lb. for 2s., and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have been expressed in this work either in square miles or in acres.

Proposed reforms.—Indian weights and measures have never been settled upon an organised basis suitable for commerce and trade characteristic of the modern age. They vary from town to town and village to village in a way that could only work satisfactorily so long as the dealings of towns and villages were self-contained and before roads and railways opened up trade between one and the other. It is pointed out that in England a hogshead of wine contains 63 gallons and a hogshead of beer only 54 gallons; that a bushel of corn weighs 46 lbs. in Sunderland and 240 lbs. in Cornwall; that the English stone weight represents 14 lbs. in popular estimation, but only 5 lbs., if we are weighing glass, and eight for meat, but 6 lbs. for cheese. Similar instances are multiplied in India by at least as many times as India is bigger than England. If we take, for instance, the maund denomination of weight common all over India, we shall find that in a given city there are nearly as many maunds as there are articles to weigh. If we consider the maund as between district and district the state of affairs is worse. Thus in the United Provinces alone, the maund of sugar weighs 48¾ seers in Cawnpore, 40 in Muttra, 72¾ in Gorakhpur, 40 in Agra, 50 in Moradabad, 43¾ in Saharanpur, 50 in Bareilly, 46 in Fyzabad, 48¾ in Shahjehanpur, 51 in Goshangunge. The maund

varies throughout all India from the Bengal or railway maund of 82-2/7 lbs. to the Factory maund of 74 lbs. 10oz. 11drs., the Bombay maund of 28 lbs., which apparently answers to the Forest Department maund in use at the Fuel Depot, and the Madras maund, which some authorities estimate at 25 lbs. and others at 24 lbs. and so on.

Committees of Inquiry.—These are merely typical instances which are multiplied indefinitely. There are variations of every detail of weights and measures in every part of India. The losses to trade arising from the confusion and the trouble which this state of things causes are heavy. Municipal and commercial bodies are continually returning to the problem with a view to devising a practical scheme of reform. The Supreme and Provincial Governments have made various attempts during 40 years past to solve the problem of universal units of weights and measures and commerce and trade have agitated about the question for the past century. The Indian railways and Government departments adopted a standard tola (180 grains), seer (80 tolas) and maund (40 seers) and it was hoped that this would act as a successful "lead" which would gradually be followed by trade throughout the empire, but the expectation has not been realised.

The Government of India considered the whole question in consultation with the provincial Governments in 1890-1894 and various special steps have at different times been taken in different parts of India. The Government of Bombay appointed a committee in 1911 to make proposals for reform for the Bombay Presidency. Their final report has not been published, but they presented in 1912 an *ad interim* report which has been issued for public discussion. In brief, it points out the practical impossibility of proceeding by compulsory measures affecting the whole of India. The Committee stated that over the greater part of the Bombay Presidency a standard of weights and measures would be heartily welcome by the people. They thought that legislation compulsorily applied over large areas subject to many diverse conditions of trade and social life would not result in bringing about the desired reform so successfully as a "lead" supplied by local legislation based on practical experience. The want of coherence, *savoir faire*, or the means of co-operation among the people at large pointed to this conclusion. The Committee pointed out that a good example of the results that will follow a good lead is apparent in the East Khandesh District of the Presidency, where the District Officer, Mr. Simcox, gradually, during the course of three years, induced the people to adopt throughout the district uniform weights and measures, the unit of weight in this case being a tola of 180 grains. But the committee abstained from recommending that the same weights and measures should be adopted over the whole Presidency, preferring that a new system started in any area should be as nearly as possible similar to the best system already prevailing there.

Proposals from England.—Suggestions have been made by the British Weights and Measures Association and the Decimal Association, respectively, at different times that British weights and measures and the decimal system should be introduced. Both proposals fail to meet the special requirements set forth by the Bombay Committee. Variations of them which have been put forward by different bodies in India in recent years are that the English pound weight and the English hundredweight should be adopted as the unit of weight for all India. The argument in favour of the importation of an outside unit in this manner is that people in India will always associate with a given, familiar denomination of weight or measure the value they have been accustomed to consider in regard to it, but that if a new weight were introduced they would learn to use it in dealing with their neighbours, without the interference of anything resembling prejudice at what they might regard as an attempt to tamper with their old, traditional standards of dealing.

Committee of 1913.—The whole problem was again brought under special consideration by the Government of India in October, 1913, when the following committee was appointed to inquire into the entire subject anew.—

Mr. C. A. Silberrad (*President*).
Mr. A. Y. G. Campbell.
Mr. Rustomji Pardoonji.

This Committee reported, in August, 1915, in favour of a uniform system of weights to be adopted in India based on the 180 grain tola. The report says:—Of all such systems there is no doubt that the most widespread and best known is that known as the Bengal or Indian Railway weights. The introduction of this system involves a more or less considerable change of system in parts of the United Provinces (Gorakhpur, Bareilly and neighbouring areas), practically the whole of Madras, parts of the Punjab (rural portions of Amritsar and neighbouring districts), of Bombay (South Bombay, Bombay city and Gujarat), and the North West Frontier Province. Burma has at present a separate system of its own which the committee think it should be permitted to retain. The systems recommended are:—

FOR INDIA.

8 khaskhas	= 1 chawal
8 chawals	= 1 ratti
8 rattis	= 1 masha
12 mashes or 4 tanks	= 1 tola
5 tolas	= 1 chatak
16 chataks	= 1 seer
40 seers	= 1 maund

FOR BURMA.

2 small ywes	= 1 large ywe
4 large ywes	= 1 pe
2 pes	= 1 mu
5 pes or 2½ mus	= 1 mat
1 mat	= 1 ngamu
2 ngamus	= 1 tikal
100 tikals	= 1 pelktha or viss.

The tola is the tola of 180 grains, equal to the rupee weight. The viss has recently been fixed at 3·60 lbs. or 140 tolas.

Government have approved the principles of the Report but left the Provincial Governments to take action.

Legislation and Inspection.

The conditions of factory labour until 1913 were regulated by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden; children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, etc.

Act of 1911.

The decision to undertake further legislation was arrived at after comprehensive inquiries. An important factor in the case was the increasing use of electric light in the Bombay Mills, which radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904-05, a large number of persons operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult; that night work of women should be prohibited; and that whole-time Medical Inspectors should be appointed.

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission. This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons" between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

Hours fixed.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a Bill was introduced in July 1908 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII of 1911.

The new Act extended the definition of "factory" so as to include seasonal factories working for less than four months in the year; shortened the hours within which children, and, as a general rule, women, may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than twelve hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5-30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

Factory Inspection.

The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of ex-officio inspectors (District Magistrates, Civil Surgeons, etc.), who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was, on the whole, well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to

increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector, Bombay having five. Except that in a few cases these officers have duties also in connection with boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, ex-officio, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by ex-officio inspectors will be to a large extent discontinued, or limited to special cases.

OILS AND OIL CAKES.

The production of oil-seeds—rape, mustard, linseed, sesamum, and ground-nut—was estimated in 1920 21 at 2,762,000 tons of which 1,89,000 tons, or 18 per cent., were exported. The percentage of exports in the 5 years ending 1913-14 was 36 per cent., so that India is now retaining a higher proportion for her own consumption.

A pamphlet on the subject recently published by the Commercial Intelligence Department points out that it is both economically and industrially unsound for India to export her oil seeds instead of manufacturing the oils and oil cakes in India. It allows other countries to reap the manufacturers' profits and at the same time deprives Indian agriculture of the great potential wealth, as cattle-food and manure, contained in the oil cakes. An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand for oil. There has also been a great increase in recent years in the number of oil mills worked by steam or other mechanical power. These crush all the commoner oil seeds and development has been especially marked in the case of mustard oil, castor oil and groundnut oil. In spite of all this there has been a perceptible diminution in the export of oil from India, particularly of cocoanut oil and linseed oil, and an increase in the export of oil seeds, which is particularly marked in the case of copra and groundnuts. The situation created by the War has naturally led to too much discussion of the possibility of developing on a large scale the existing oil-milling industry in India.

There are three difficulties with which any proposal to develop in India an **oil-milling industry** on a great scale is faced. In the first place, there exist high protective tariffs in European countries which encourage the export from India of the raw material rather than the manufactured product. Secondly, there is a better market for the oil cake in Europe than in India and the freight on oil seeds is less than the freight on cake. Thirdly, it is much easier and less expensive to transport oil seeds by sea than it is to transport oil. While this has been the position in the European markets, Indian made oils, other than cocoanut oil, have made enough headway in Eastern markets to suggest the possibility of a development of those markets.

The problem of finding a market for **oil cakes** is equally important. The value of oil cakes is much better appreciated in Europe than in India. The Indian cultivator is prejudiced against the use of machine-made cake as a cattle food or as manure because he considers that it contains less oil and therefore less nourishment than the village-made cake. He is therefore unwilling to buy it except at a reduced price. His prejudices on this point have no justification in fact since experts are agreed that mill cake is a better food for cattle than village-made cake. Even when the mill cake contains less oil than the village cake, there is still more oil in the cake than cattle can digest. The excess of oil in the village cake, where it exists, is a drawback and not an advantage to the use of the cake as food. A considerable amount of demonstration work has been done by the Agricultural Departments of Government in order to remove the cultivator's prejudices and there is said now to be an increasing demand for most classes of mill cake.

Life Insurance.

There are no publications from which a complete statistical survey of the various branches of insurance work in India can be obtained, but the official "Abstracts of Accounts and Valuation Statements in respect of Life Assurance Companies doing business in British India," published by the Government of India, give much information in regard to the 75 Life Assurance Companies subject to the provisions of the Indian Life Assurance Companies Act, 1912.

The oldest of the Indian Companies were established in Madras about 80 years ago Bombay has none older than the Bombay Mutual, the Oriental and the Bombay Widows' Pension Fund which were established about 40 years ago. Life Assurance seems not to have been started in Bengal until much later. and it was not until 1906 that many Companies were established either in that Presidency or elsewhere in India. The year 1919 was marked by the formation of several new companies, more particularly in Bombay.

In his introductory note to the official publication already mentioned, Mr. H. G. W. Meikle, Actuary to the Government of India, dealing with the year 1920, says:—

The summaries of the Indian companies show that the new sums assured under ordinary life assurance policies during the year under review show a considerable increase, the total amount being nearly 5¼ crores as against 4¼ crores in the last year. There has been a steady increase each year since 1916 when the amount was only 1¾ crores. Endowment Assurance policies, under which the sum is payable at some stipulated age or at previous death, constitute over 83 per cent. of the total business.

The total sums assured, including bonus additions, remaining in force under ordinary life assurance policies issued by Indian companies have increased by over three crores during the year and amount to over 31 crores of rupees, or about 20 million pounds sterling at the present rate of exchange.

The outstanding features are the decrease in the claims by death last year and the large sums which were written off or transferred to investment reserve funds in the past six years to cover the depreciation of investments. This has caused a reduction in the amounts by which the life assurance funds improved in those years more particularly in the years 1916 and 1918 The total amount of **depreciation** already met is nearly 1½ crores, but as values have fallen considerably since the previous valuations further depreciation of a very large amount will have to be met in the next few years. Dividends to shareholders paid out of the life assurance funds amount to less than 1 per cent. of the sums paid as claims to policy-holders Before the Life Act came into force almost all of the proprietary Indian companies used to pay dividends to their share-holders, irrespective of whether or not their life assurance funds permitted of such dividends being declared. Now no dividend is paid by any company out of its life funds except out of profits ascertained by an actuarial valuation of its assets and liabilities. The expense ratio shows an increase each year since 1918; this is due to the increasing amount of new business transacted in the last two years as well as to the general all round advance in salaries and prices which has now to be met.

The average **rate of annual premium** payable under the policies issued by Indian companies is nearly 5½ per cent. of the sum assured. The corresponding rate deduced from the returns to the British Board of Trade is considerably lower, the difference being largely due to the fact that endowment assurances constitute a much larger proportion of the policies issued by Indian than by British Companies.

The average **amount of sum assured** under the policies issued by Indian companies is larger than in previous years and is now about Rs.1,900. The average sum assured under policies issued in India by the British companies is much larger than this and probably between Rs. 4,000 and Rs 5,000. Under most of the policies issued by Indian companies the premiums are payable by monthly instalments, while with the policies of the other companies a much larger number of the premiums are renewable yearly and half-yearly than monthly. These factors are greatly responsible for the Indian companies having the higher expense ratios.

The total assets of the Indian companies exceed 10 crores. They consist of Indian Government securities to the extent of 80 per cent of their total holdings in stock exchange investments.

Rate of interest.—Government 3½ per cent. paper which in 1914 was worth 96 per cent. of the face value depreciated to under 50 per cent. last December Now it is about 60. At this price it does not yield such a good return as the 6 per cent. income tax free redeemable loan recently issued by the Government of India. With Government 3½ per cent. paper at 53½ the annual return after allowing for income tax at 1 anna 4 pies in the rupee would be 6 per cent. The difference of over 6 points is possibly due to optimistic views being entertained of the action which Government may take to rehabilitate these irredeemable securities, and possibly also to the thought that the price will increase above 60 in a few years time, so that although the annual net return may be less than 6 per cent. on the present purchase price, the higher price which the purchaser expects to realise a few years hence will more than compensate for the smaller annual return in the meantime.

Rates of Premium and Surrender value.—If it becomes necessary for any company to adopt a higher rate of interest for the purpose of the valuation, it is quite likely that the reserve values of many policies will be found to be less than the guaranteed surrender values. In such circumstances the rates of surrender values hitherto guaranteed will be unsuitable for new policies as well as a source of weakness under the existing ones. There is yet another consideration which must now also influence the grant of correct surrender values. The expense ratio shows signs of advancement on account of the general rise in rents, printing, stationery, etc., as well as the advance in salaries consequent

on the general rise in prices. The rate at which surrender values are now allowed ought, therefore, to be largely reduced. At the same time it will probably be found that the rates of premium should be revised so as to give effect to the increased cost of procuration and management of business as well as to the higher rate of interest now obtainable. The higher interest would bring about a reduction in the rates of premium unless this benefit be counterbalanced by the increased loading now found to be necessary to meet expenditure. There are many other factors which must be taken into account in fixing on suitable surrender values and in the calculation of premium rates. The questions should not be decided without sound actuarial advice.

Rates of Mortality in India.—Actuaries in this country are frequently asked for a table which will show the expectation of life in India Sometimes this is asked for without any information being given as to the use to which the table is desired to be put. The rates might, for instance, be those applicable to selected Indian male lives assured, to the wives and daughters of Europeans in Government service, to the wild Hazaras from across the frontier or to the widows of P. & O. lascars. In every civilised country there are many different standard tables of mortality The rates vary not only with occupation, sex, etc., and are different for annuitants and lives assured, but vary with almost each different class of policy under which the lives are insured In India the problem is further complicated owing to her heterogenous population which differ from one another in their traditional occupation, mode of living, social and religious customs, etc, in a more marked manner than in any European country. It is thus not possible to get tables of mortality which can rightly be claimed as applicable to each and all of the almost innumerable different classes of lives in this country, but it will probably be of help in this direction if the main characteristics of some of the more recent important mortality investigations which have come to my notice relating to lives of residents in India be contrasted with well-known British standard mortality tables. For instance, it has been found that for members of the Indian Civil Service the expectation of life at ages over 30 is equal to that shown in the OM table for lives between 2 and 3 years younger. In the first few years of service in India the death rate in the I. C. S. is much heavier than the rate experienced after the first period of furlough and almost as heavy as for other members of the service 20 years older. For British officers in the Indian Army the death rate during the greater portion of service was, before the war, much heavier than the OM table. After retirement it was less than the rate in that table for lives of the same age, being about equal to the rate for those 2 years younger. The wives and daughters of members of these two services experience a lighter mortality than the select rates in the British Offices table for female annuitants. In the uncovenanted services of Government the rate of mortality applicable to members is approximately equal to those for lives 4 years older in the HM table. For wives and daughters of that in the uncovenanted services the expectation of life is about equal to the ultimate rate for lives two years older in the British Offices table for female annuitants.

It is impossible to differentiate correctly between the rates applicable to each of the many different races in India, but it has been found that the expectation of life of Mahomedan lives assured is less than that of Hindus, which again is less than that of Parsees. The rates of mortality and expectation of life deduced from the Indian census are not claimed to be more than an approximate indication of the actual rates prevailing. This unsatisfactory state of affairs must continue so long as the data relating to births and deaths, as well as to the ages at the date of the census remain as defective as has hitherto been the case.

Actuarial Valuations.—Up till now 42 of the Indian companies have submitted the results of actuarial valuations of their assets and liabilities Twenty-one of these valuations disclosed a surplus In 12 of the remaining twenty-one, the deficit was covered by the paid-up capital, thus proving solvency but precluding the payment of either bonus or dividend In 7 cases solvency was restored by reduction of sums assured or by calling up further capital. In 2 cases the degree of insolvency necessitated the winding up of the concern Many of the other companies which went into liquidation without an actuarial valuation being made adopted this course as the unsoundness of their financial position could be clearly demonstrated without it.

Mutual Companies.—With two exceptions, all the Indian companies shown as established within the last 25 years are proprietary companies with a share capital; but of the older companies, the great majority are mutual companies. These mutual companies generally have very small funds and it is found that payment of the full deposit prescribed in section 4 of the Life Act sometimes presses unduly on their resources, and as payment of the full deposit also interferes with the formation of new mutual companies, Government will be prepared to consider any application from an Indian mutual company for permission to pay a smaller deposit One or two of the existing Life Offices are called "Mutual" companies even although they have share capital; such nomenclature should be avoided in the case of companies established hereafter, as there is generally a recognised technical meaning attached to the use of the word "Mutual" in connection with life assurance, in consequence of which its use by a company having a share capital is likely to be misleading.

Since the passing of the Life Act twenty-two Indian life assurance companies have gone into liquidation.

Provident Insurance Societies.—Although several of the Indian Life Assurance companies formerly in existence may deservedly have had very undesirable reputations, it must be remembered that a great deal of discredit has been brought on the better class of such companies owing to the existence of a large number of Provident Societies The essential difference between a Life Assurance Company and a Provident Insurance Society is that the company is subject to the Life Act and not to the Provident Insurance Societies Act if, under insurances payable at the death or survivance of any one

life, it undertakes either to pay sums which in the aggregate exceed Rs 500 or to receive premiums which in the aggregate exceed Rs. 25 in any one year where the period for which the premiums are payable is unlimited, or Rs. 250 altogether where such period is limited. If, as may happen in the case of a dividing society, the sum assured payable at death is not fixed but may in certain contingencies exceed Rs. 500, the society is subject to the Life Act. The fact of either the sum assured or the premiums exceeding those limits under any other form of insurance than life assurance does not make the Society subject to the Life Act.

Fifteen years ago there were about 1,200 societies in existence in India of the Provident Insurance Society type. Now 29 only remain, 5 of which are proprietary and the rest mutual. The average paid-up capital of the proprietary societies is only about Rs. 1,600. Nine of these societies do ordinary life assurance business, one is a widows' fund and another transacts sickness insurance business. These 11 societies could withadvantage undergo actuarial valuation. The remaining 18 societies either work on the dividing plan without any minimum guarantee, or on the death call system, and are consequently not susceptible of actuarial valuation. They, however, are mostly in a moribund state. Eight of the Provident Insurance Societies transact other classes of business, mostly marriage insurance, in addition to life business.

Business other than Life Assurance.—The following is a list of Indian companies which transact other classes of insurance business in addition to life assurance :—

NAME OF COMPANY.	CLASS OF BUSINESS OTHER THAN LIFE ASSURANCE.
All India United	Fire and Marine.
New India	Fire, Marine, and Accident.
Himalaya	Fire, Marine, Motor Car, etc.
Bharat, Empire, National, National Indian	Fidelity Guarantee.
Rechabites	Sickness.
Sind Hindu Provident	Marriage.
Christian Mutual	Capital Redemption.
Bengal Insurance and Real Property	Bond investment.

Indian Life Assurance Companies.—The following list shows the Indian companies in existence in the several provinces of India arranged according to the year wh enthey were founded:—

The names of Mutual Companies have been printed in Capitals.

Year when established.	Madras Presidency.	Bombay Presidency.	Bengal Presidency	Punjab.	United Provinces, Assam, Ajmer-Merwara, Central Provinces and Bangalore.
1829 ..	MADRAS EQUITABLE	....	.. .	....	....
1833 ..	MADRAS WIDOWS.	....	.. .	....	....
1847 ..	....	....	....	CHRISTIAN MUTUAL.	....
1849 ..	TINNEVELLY.	....	....	....	....
1871 ..	....	BOMBAY MUTUAL.	...	....	....
1874 ..	....	Oriental. ..	.. .	....	....
1876 ..	....	BOMBAY WIDOWS.	....	....	....
1884 ..	INDIAN CHRISTIAN.	....	....	....	....
1885 ..	...,	GOAN MUTUAL.	....	....	....
1888 ..	MANGALORE R.C.	B. B. AND C. I. ZORON.	....	....	....

Year when established	Madras Presidency.	Bomaby Presidency.	Bengal Presidency.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Central Provinces and Bangalore.
1889	....	BOMBAY ZORON ..	....	..	....
1891	.	GUJARAT ZOROASTRIAN.	HINDU MUTUAL.	.	.
1892	.	Indian Life ..			
1893	..	....	.	PUNJAB MUTUAL.	RECHABITES (U. P.)
1894	.	SIND HINDU ..		....	..
1896	.	Empire of India .	...	Bharat	..
1901	..	....	..	SIMLA MUTUAL	.
1906	United India	All India United .	National Indian, National.	Co-operative	
1907	....	....	Hindusthan Co-operative.	....	.
1908	.	Bombay Life .	India Equitable .	Hindusthan Death Benefit.	General (Ajmer).
1910	.	....	Bengal Mercantile	....	Arvya (Assam), ALL INDIA & BURMA (Bangalore).
1911		Asian Commercial			..
1912		..	Unique .		
1913		Industrial and Prudential; Western India; East and West.	Light of Asia; Provincial.		.
1914		....	..	British India	
1916		Zenith	..	...	
1918		..	..	.	India Allied (U.P.)
1919		New India New Era .	Himalaya .	.	....
1910		....	Bengal Insurance and Real Property.	..	....
1921	.	Indian-Lion; Great India.	....	.	Nagpore Pioneer (C. P.).

Postal Insurance Fund.—This Fund was instituted by the Government of India for the benefit of the postal employees in 1883 but gradually admission to this Fund has been thrown open to almost all classes of Government servants who are employed on civil duties. On the 31st March 1920 there were 30,699 policies in force assuring a total sum of Rs. 4,67,79,153 including bonus additions. The life assurance fund on that date amounted to Rs. 1,59,89,615. The last actuarial valuation disclosed a surplus which permitted a bonus being paid by way of addition to the sum assured at the rate of 1½ per cent. under whole life policies and 1 per cent. under endowment assurance for each year's premium paid in the valuation period. The limit of assurance permissible under the rules of the Fund, which was previously Rs. 4,000, has now been raised to Rs. 10,000.

British, Colonial and Foreign Companies.—There are at present 24 British, Colonial and Foreign Life Offices which have a place of business in India. Of these, 17 are constituted in Britain, 2 in Canada, 1 in Australia, 1 in the Straits Settlements, 2 in Shanghai and 1 in the United States of America. Nearly all are partially exempt from the operation of the Indian Life Assurance Companies Act of 1912 on the ground that, when it came into force, they were carrying on business in the United Kingdom in conformity with the provisions of the British Assurance Companies Act of 1909. The principal effects of the exemptions allowed to these British, Colonial and Foreign companies are that they are freed from the necessity either of making a deposit with the Controller of Currency or of making separate statements respecting their Indian business. Those granted exemptions are allowed to submit their accounts in the form prescribed by the British Assurance Companies Act of 1909. The Indian Life Act has to a great extent been enacted on the lines of the British Act. All of these 24 companies grant annuities and in addition carry on the other classes of business shown in the following statement. This statement also indicates the proportion of each company's business which is transacted in the United Kingdom. Unfortunately no similar information can be given regarding their Indian business as none of the companies, except the Great Eastern, the China and the Shanghai, are required to give any particulars of this nature. These three companies transact about ten per cent. of their business in India.

	Name of Company.	Year when established.	Head Office.	Insurance business done. F = Fire; M = Marine. C = Capital redemption S = Sickness and Accident. G = Fidelity Guarantee and Burglary, etc.					Percentage of Life Assurance premium income in the United Kingdom to total life assurance premium income.
Constituted in the United Kingdom.	1. Alliance ..	1824	London ..	F	M	C	S	G	97·4
	2. Atlas ..	1808	London ..	F	..	C	S	G	99·2
	3. Commercial Union ..	1861	London ..	F	M	C	S	G	95·3
	4. Gresham ..	1848	London ..	..	..	C	..	..	18·1
	5. Law Union and Rock ..	1806	London ..	F	..	C	S	G	..
	6. Liverpool and London and Globe ..	1836	Liverpool ..	F	M	C	S	G	98·6
	7. London Assurance Corporation .	1720	London ..	F	M	C	S	G	..
	8. North British and Mercantile.	1823	Edinburgh	F	..	C	..	..	8·95
	9. Northern ..	1836	Aberdeen ..	F	..	C	S	G	..
	10. Norwich Union ..	1797	Norwich .	..	..	C	..	..	63·9
	11. Phœnix ..	1782	London ..	F	M	C	S	G	88·8
	12. Royal ..	1845	Liverpool ..	F	M	C	S	G	82·2
	13. Royal Exchange ..	1720	London ..	F	M	C	S	G	95·4
	14. Royal London Auxiliary	1910	London ..	F	..	C	S	G	..
	15. Scottish Union and National ..	1824	Edinburgh ..	F	M	C	S	G	81·7
	16. Standard .	1825	Edinburgh ..	..	..	C	..	..	..
	17. Yorkshire ..	1824	York .. .	F	M	C	S	G	99·3
Not constituted in the U. K.	18. Manufacturers	1887	Canada .	..	..	..	..	..	·86
	19. Sun of Canada	1865	Canada ..	..	.	C	S	..	..
	20. National Mutual of Australasia. ..	1869	Australia ..	..	..	..	..	..	16·7
	21. Great Eastern	1909	Singapore ..	..	.	..	..	..	*Nil*
	22. China ..	1898	Shanghai ..	..	..	..	..	..	*Nil*
	23. Shanghai ..	1905	Shanghai ..	..	..	..	..	..	*Nil*
	24. New York ..	1845	United States of America.	..	..	..	..	..	·7

The following table shows some of the voluminous information relating to the Indian business of some of the non-Indian Companies which is stated in the returns submitted periodically to the Government of India :—

Name of Company.	Year at close of which returns relate.	Indian Business in Force at Date of Return.			
		Number of Policies.	Sum Assured and Bonuses.	Office Annual Premium.	Net Actuarial Liability.
			£	£	£
Commercial Union .	1912	612	354,539	15,671	158,810
	1917	550	311 894	12,627	156,474
Gresham . .	1914	5,461	888,052	45,886	188,975
	1919	5,981	1,017,197	51,647	282,084
North British and Mercantile .	1915	6,100	2,056 807	96,952	653,454
	1920	7,662	2,741,108	125 881	945,410
Norwich Union . ..	1916	3,739	830,701	46,535	144,988
	1920	6,111	1,457,755	82,167	305,301
Phœnix	1915	2,954	755,545	36,210	161,207
	1920	3,892	1,020,486	49,862	286,045
Royal	1914	2,250	820,558	37,956	216,241
	1919	2,623	1,303,131	58,351	410,640
Royal Exchange	1915	731	143,316	6,318	37,008
	1920	867	170,916	7,672	47,788
Scottish Union and National (including City of Glasgow)	1914	4,995	1,621,810	77,550	563,031
	1919	4,804	1,574,311	76,683	812,613
Yorkshire	1914	79	22,686	1,037	3,740
	1919	182	91,765	4,377	18,228

Chambers of Commerce.

Modern commerce in India was built up by merchants from the west and was for a long time entirely in their hands. Chambers of Commerce and numerous kindred Associations were formed by them for its protection and assistance. But Indians have in recent years, taken a large and growing part in this commercial life. The extent of their participation varies greatly in different parts of India, according to the natural proclivities and genius of different races. Bombay, for instance, has led the way in the industrial and commercial regeneration of the new India, while Bengal, very active in other fields of activity, lags behind in this one. Arising from these circumstances we find Chambers of Commerce in Bombay, Karachi, Calcutta, Madras and other important centres, with a membership both European and Indian; but alongside these have sprung up in recent years certain Associations, such as the Bombay Indian Merchants' Chamber and Bureau, of which the membership is exclusively Indian. These different classes of bodies are in no sense hostile to one another and constantly work in association.

The London Chamber of Commerce in 1912, realising the increasing attention demanded by the economic development of India, took steps to form an "East India Section" of their organization. The Indian Chambers work harmoniously with this body, but are in no sense affiliated to it, nor is there at present any inclination on their part to enter into such close relationship, because it is generally felt that the Indian Chambers can themselves achieve their objects better and more effectively than a London body could do for them, and on various occasions the London Chamber, or the East India Section of it have shown themselves out of touch with what seemed locally to be immediate requirements in particular matters.

A new movement was started in 1913 by the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, a leading millowner and public citizen of Bombay, which aims at effecting great improvement in strengthening Indian commercial organization. Sir Fazulbhoy's original plan was for the formation of an Indian Commercial Congress. The proposal met with approval in all parts of India. The scheme was delayed by the outbreak of war but afterwards received an impetus from the same cause and the first Congress was held in the 1915 Christmas holiday season in the Town Hall, Bombay. The list of members of the Reception Committee showed that all the important commercial associations of Bombay were prepared to co-operate actively.

The Congress was attended by several hundred delegates from all parts of India. Mr. (now the Hon. Sir) D. E. Wacha, President of the Bombay Indian Merchants' Chamber, presided, as Chairman of the Reception Committee, at the opening of the proceedings and the first business was the election of Sir Fazulbhoy Currimbhoy as the first President. The Congress resolved upon the establishment of an Associated Indian Chamber of Commerce, and elected a Provincial Committee empowered to take the necessary steps to get the Association registered and to enrol members and carry on work. The Congress also approved of the draft constitution. (See also under The Indian Industrial and Commercial Congress on page 393).

The following are the principal paragraphs of a Memorandum of Association of the new Associated Chamber as approved by the Congress.—

I. The name of the Chamber will be "THE ASSOCIATED INDIAN CHAMBER OF COMMERCE."

II. The Registered Office of the Chamber will be in Bombay.

III. The objects for which the Chamber is established are:—

(*a*) To discuss and consider questions concerning and affecting trade, commerce, manufactures, and the shipping interests, at meeting of delegates from Indian Chambers of Commerce and Commercial Associations or Bodies and to collect and disseminate information from time to time on matters affecting the common interests of such Chambers or Associations or Bodies and the commercial, manufacturing and shipping interests of the country.

(*b*) To communicate the opinions of the Chambers of Commerce and other Commercial Associations or Bodies separately or unitedly, to the Government or to the various departments thereof, by letter, memorial, deputation or otherwise.

(*c*) To petition Parliament or the Government of India or any Local Government or authority on any matter affecting trade, commerce, manufacture or shipping.

(*d*) To prepare and promote in Parliament or in the Legislative Councils of India, both Imperial and Provincial, Bills in the interest of trade, commerce, manufactures, and shipping of the country and to oppose measures which, in the opinion of the Chamber, are likely to be injurious to those interests.

(*e*) To attain those advantages by united action which each Chamber or Association or body may not be able to accomplish in its separate capacity.

(*f*) To have power to establish an office either in England or in any part of British India with an Agent there, in order to ensure to the various Chambers early and reliable information on matters affecting their interests and to facilitate communication between the Chamber or individual chambers and the Government or other public bodies, and generally to conduct and carry on the affairs of the Chamber.

(*g*) To organise Chambers of Commerce, Commercial Associations or Bodies in different trade centres of the Country.

(*h*) To convene when necessary the Indian Commercial Congress at such places and at such times as may be determined by a Resolution of the Chamber.

(*i*) To do all such other things as may be incidental or conducive to the above objects.

The Articles of Association provide for the management of the Chamber by an Executive Council composed of a President, Vice-President, and ten other members elected at the annual meeting of the Associated Chamber, the Executive Council to present a report and statement of accounts at each annual meeting. The Articles declare the number of members of the Associated Chamber not to exceed one hundred, and the Executive Council are given power to elect honorary members. "There shall be an annual meeting of the Associated Indian Chamber held at Bombay on a date to be fixed by the Executive Council in the month of February," or at some other time, and "semi-annual or special meetings . . . may be convened by the Executive Council or on the requisition of one-third of the total number of members addressed to the Secretary . . . "

The following are details of the principal Chambers of Commerce and kindred bodies in India at the present time :—

BENGAL.

The Bengal Chamber of Commerce was founded in 1834. Its head-quarters are in Calcutta. Other societies connected with the trade and commerce of the city are the Royal Exchange, the Bengal Bonded Warehouse Association, the Calcutta Trades Association, the Bengal National Chamber of Commerce and the Marwari Chamber of Commerce. The Bengal Chamber is registered with a declaration of membership of 300. Its objects are the usual purposes connected with the protection of trade "in particular in Calcutta." There are two classes of members. Permanent (Chamber and Associate) and Honorary.

Merchants, bankers, shipowners, representatives of commercial, railway and insurance companies, brokers, persons and firms engaged in commerce, agriculture, mining or manufacture, and joint stock companies or other corporations, formed for any purpose or object connected with commerce, agriculture, mining or manufacture, and persons engaged in or connected with art, science or literature, may be elected as permanent members of the Chamber.

The following are the office bearers of the Chamber for the year 1921-22 :—

President.—Sir R. M. Wats on Smyth, M L.C. (Turner Morrison & Co., Ltd.)

Vice-President.—Mr. C. W. Rhodes, C.B.E., M.L.A. (Hoare, Miller & Co., Ld.)

Committee.—Mr. J. Coates (Eastern Bengal Railway), Mr. W. C. Currie, M.L.C., (Mackinnon, Mackenzie & Co), Mr. C. F. Beadel, M.L.C. (Becker, Grey & Co., Calcutta, Ld), Mr. W. J. K. Hegarty (National Bank of India, Ld.), Mr. R. Langford James, M.L.C. (James Finlay & Co.), Mr. W. L. Carey, M.L.C. (Bird & Co.), and Hon. Sir Alexander Murray, C.B.E. (Thos. Duff & Co , Ld.).

The Secretary of the Chamber is Mr. H. M. Haywood. Asst. Secys.—Mr. D. K. Cunnison and Mr. A. C. Daniel.

The following are the public bodies (among others) to which the Chamber has the right of returning representatives, and the representatives returned for the current year :—

Council of State.—Hon. Sir Alex. Murray, C.B.E.

Bengal Legislative Council.—Sir R. M. Watson Smyth, M.L.C., A. Cochran, C.B.E , M.L.C., C. F. Readel, M.L.C., W. C. Currie, M.L.C., James E. Roy, M.L.C., and George Morgan, M.L.C.

Calcutta Port Commission — Mr. James E. Roy, M.L.C. (Macneill & Co), Mr. R O. Law (Birkmyre Brothers), Mr J.Campbell, M.L.C. (Mackinnon, Mackenzie & Co.), Hon. Mr. J. H. Pattinson M L.C. (H. V. Low & Co.), Mr R. M Watson Smyth, M.L.C. (Turner Morrison & Co , Ld.), and Mr. F. C. Danger, C.B.E. (Hoare, Miller & Co , Ld).

Calcutta Municipal Corporation.— Messrs. Norman R. Luke (Jas Luke & Sons), W. S. J. Willson (Turner Morrison, & Co., Ld.), George Morgan, M L C. (Morgan, Walker & Co) and W. R. Rae, M.L.C. (Sun Insurance Office).

Bengal Boiler Commission.—Messrs. John Williamson (Kinnison Jute Mills Co., Ld.), H. H. Reynolds (Andrew Yule & Co.) and H. E. Skinner (Jessop & Co , Ltd).

Board of Trustees of the Indian Museum.—Sir R. M. Watson Smyth, M.L.C. (Turner, Morrison & Co., Ltd.).

Bengal Smoke Nuisances Commission.—Messrs. A. Cochran, C.B E. M L C , (Burn & Co. Ltd.) and J. R. Murray (Clive Jute Mills.

Calcutta Improvement Trust.—Mr. C.F. Beadel M.L.C. (Becker, Gray & Co., Calcutta. Ltd)

The Chamber elects representatives to various other bodies of less importance, such as the committee of the Calcutta Sailors' Home, and to numerous subsidiary associations. The following are the recognised associations of the Bengal Chamber of Commerce :—

Calcutta Wheat and Seed Trade Association, Indian Jute Mills Association, Indian Tea Association, Calcutta Tea Traders Association, Calcutta Fire Insurance Agents Association, Calcutta Import Trade Association, Calcutta Marine Insurance Agents Association, The Wine, Spirit and Beer Association of India, Indian Mining Association, Calcutta Baled Jute Association, Indian Paper Makers Association, Indian Engineering Association, Calcutta Jute Fabrics Shippers Association, Calcutta Hydraulic Press Association, Jute Fabric Brokers Association, Baled Jute Shippers Association, Calcutta Jute Dealers Association, Calcutta Liners Conference, Calcutta Hides Skins Shippers Association, Northern India Tanners' Federation, Indian Indigo Association and Calcutta Motor Insurance Association.

The Chamber maintains a Tribunal of Arbitration for the determination, settlement and adjustment of disputes and differences relating to trade, business, manufactures, and to customs of trade, between parties, all or any of whom reside or carry on business personally or by agent or otherwise in Calcutta, or elsewhere in India or Burmah, by whomsoever of such parties the said disputes and differences be submitted. The Secretary of the Chamber acts as the Registrar of the Tribunal, which consists of such members or assistants to members as may, from time to time, annually or otherwise be selected by the Registrar and willing to serve on the Tribunal. The Registrar from time to time makes a list of such members and assistants.

The Chamber also maintains a Licensed Measurers Department controlled by a special committee. It includes a Superintendent (Mr. R. Ellis), Deputy Superintendent (Mr. A. H. Lugg), Head Office Manager (Mr. C. G. Smith) and four Assistant Superintendents (Messrs. J. G. Smyth) A. H. Mathews, W. H. Kitchen and G. L. Bennet) and the staff at the time of the last official returns consisted of 127 officers. The usual system of work for the benefit of the trade of the port is followed. The Department has its own provident fund and compassionate funds and Measurers' Club. The Chamber does not assist in the preparation of official statistical returns. It publishes weekly the *Calcutta Prices Current* and its Monthly Supplement and also publishes a large number of statistical circulars of various descriptions in addition to a monthly abstract of proceedings and many other circulars on matters under discussion.

BOMBAY.

The object and duties of the Bombay Chamber, as set forth in their rules and regulations, are to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the general mercantile interests of this Presidency; to collect and classify information on all matters of general commercial interest; to obtain the removal, as far as such a Society can, of all acknowledged grievances affecting merchants as a body, or mercantile interests in general: to receive and decide references on matters of usage and custom in dispute, recording such decisions for future guidance, and by this and such other means, as the Committee for the time being may think fit, assisting to form a code of practice for simplifying and facilitating business; to communicate with the public authorities, with similar Associations in other places and with individuals, on all subjects of general mercantile interests; and to arbitrate between parties willing to refer to, and abide by, the judgment of the Chamber.

The Bombay Chamber was established in 1836, under the auspices of Sir Robert Grant, who was then Governor of the Presidency, and the programme described above was embodied in their first set of rules. There is affiliated with the Chamber the Bombay Millowners' Association, which exists to carry out the same general objects as the Chamber in the special interests of "millowners and users of steam and water power." According to the latest returns, the number of Chamber members is 149 and the number of Associated members is 2. Of these numbers 20 represent banking institutions, 7 shipping agencies and companies, 3 firms of solicitors, 3 railway companies, 6 insurance companies, 15 engineers and contractors, 97 firms engaged in general mercantile business.

All persons engaged or interested in mercantile pursuits desirous of joining the Chamber and disposed to aid in carrying its objects into effect are eligible to election to membership by ballot. The Chamber member's subscription is Rs. 360 and the Associate member's subscription is Rs. 300 per annum and an additional charge of Rs. 640 per annum is made to firms as subscription to the trade returns published by the Chamber. Gentlemen distinguished for public services, or "eminent in commerce and manufactures," may be elected honorary members and as such are exempt from paying subscriptions. Any stranger engaged or interested in mercantile pursuits and visiting the Presidency may be introduced as a visitor by any Member of the Chamber inserting his name in a book to be kept for the purpose, but a residence of two months shall subject him to the rule for the admission of members.

Officers of the Year.

The affairs and funds of the Chamber are managed by a committee of nine ordinary members, consisting of the chairman and deputy-chairman and seven members. The committee must, as a rule, meet at least once a week and the minutes of its proceedings are open to inspection by all members of the Chamber, subject to such regulations as the committee may make in regard to the matter. A general meeting of the Chamber must be held once a year and ten or more members may requisition, through the officers of the Chamber, a special meeting at any time, for a specific purpose.

The Chamber elects representatives as follows to various public bodies:—

The Council of State, one representative.

Legislative Council of the Governor of Bombay, two representatives.

Bombay Municipal Corporation, two members, elected for three years.

Board of Trustees for the Improvement of the City of Bombay, one member, elected for two years.

Board of Trustees of the Port of Bombay, five members, two and three being elected in alternate years.

Representatives on the Legislative Councils become ex-officio members of the committee of the Chamber, during their terms of office, if they are not already members.

The following are the officers of the Chamber for the year 1920-21 and their representatives on the various public bodies:—

Chairman.—Mr. H. P. W. Macnaghten, M.L.C (Wallace & Co.)

Deputy Chairman.—Mr. V. A. Grantham.

Committee.—The Hon'ble Sir A. H. Froom, M.C.S. (Messrs. Mackinnon Mackenzie & Co.), Mr B Brown (James Finlay & Co., Ld.), Mr T. W. Dowding (Turner, Morrison & Co., Ld.), Mr A. K Graham (W. & A. Graham & Co.), Mr. J. Greig (The Chartered Bank of India, Australia and China), Mr C A Hawes, V. D. (G. I. P. Railway), Mr. A. B Morrison (Shaw, Wallace & Co.)

Secretary: Mr. C. B. Sayer.

Representatives on—

Council of State:—The Hon'ble Sir A H Froom.

Bombay Legislative Council: Messrs. H. P. W. Macnaghten, M.L.C and S. J. Gillum, M.L.C

Bombay Improvement Trust: Mr. Harry T. Gorrie.

Bombay Port Trust:- The Hon Sir A. H Froom Mr A K. Graham, Mr T. W Dowding, Mr. Harry T Gorrie and Mr F C. Annesley.

Bombay Municipality: Messrs. F. Portlock (James Mackintosh & Co.) and W. Turner Green (A. F. Ferguson & Co.)

Advisory Board of Sydenham College of Commerce and Economics: Messrs. W. A. Haig Brown and C. H. Wilson, C.I.E.

Bombay Smoke Nuisances Commission: Mr. A. Geddis.

St. George's Hospital Advisory Committee: Mr. V. A. Grantham.

Indigenous Industries Advisory Committee: Mr. H. P. W. Macnaghten, M.L.C.

Special Work.

One of the most important functions performed by the Chamber is that of arbitration in commercial disputes. Rules for this have been in existence for many years and have worked most satisfactorily. The decisions are in all cases given by competent arbitrators appointed by the General Committee of the Chamber and the system avoids the great expense of resort to the Law Courts.

A special department of the Bombay Chamber is its Statistical Department, which prepares a large amount of statistical returns connected with the trade of the port and of great importance to the conduct of commerce. The department consists of fourteen Indian clerks who, by the authority of Government, work in the Customs House and have every facility placed at their disposal by the Customs authorities. They compile all the statistical information in connection with the trade of the port, in both export and import divisions, which it is desirable to record. No other Chamber in India does similar work.

The Bombay Chamber publishes a Daily Arrival Return which shows the receipts into Bombay of cotton, wheat and seeds, and a Daily Trade Return, which deals with trade by sea and shows in great detail imports of various kinds of merchandise and of treasure, while the same return contains particulars of the movements of merchant vessels.

The Chamber publishes twice a week detailed reports known as Import and Export manifests, which give particulars of the cargo carried by each steamer to and from Bombay.

Three statements are issued once a month. One shows the quantity of exports of cotton, seeds and wheat from the principal ports of the whole of India. The second gives in detail imports from Europe, more particularly in regard to grey cloths, bleached cloths, Turkey red and scarlet cloths, printed and dyed goods, fancy cloth of various descriptions, woollens, yarns, metals, kerosine oil, coal, aniline dyes, sugar, matches, wines and other sundry goods. The third statement is headed, "Movements of Piece Goods and Yarn by Rail," and show the despatches of imported and local manufactured piece-goods and yarn from Bombay to other centres of trade served by the railways.

The "Weekly Return" issued by the Chamber shows clearances of a large number of important descriptions of merchandise. A return of "Current Quotations" is issued once a week, on the day of the departure of the English mail, and shows the rates of exchange for Bank and Mercantile Bills on England and Paris, and a large quantity of general banking and trade information.

The annual reports of the Chamber are substantial tomes in which the whole of the affairs of the Chamber and the trade of the port during the past year are reviewed.

The Chamber has also a Measurement Department with a staff of 18, whose business is that of actual measurement of exports in the docks before loading in steamers. Certificates are issued by these officers with the authority of the Chamber to shippers and ship agents as to the measurement of cotton and other goods in bales or packages. The measurers are in attendance on the quays whenever there are goods to be measured and during the busy season are on duty early and late. The certificates granted show the following details:—

(*a*) the date, hour and place of measurement;
(*b*) the name of the shipper;
(*c*) the name of the vessel;
(*d*) the port of destination;
(*e*) the number and description of packages;
(*f*) the marks;
(*g*) the measurement; and, in the case of goods shipped by boats;
(*h*) the registered number of the boat;
(*i*) the name of the tindal.

Bombay Millowners' Association.

The Bombay Millowners' Association was established in 1875 and its objects are as follow:—

(*a*) The protection of the interests of millowners and users of steam water and/or electric power in India
(*b*) The promotion of good relations between the persons and bodies using such power;
(*c*) The doing of all those acts and things by which these objects may be furthered.

Any individual partnership or company, owning one or more mill or mills or one or more press or presses or one or more ginning or other factory or factories actuated by steam, water, electric and/or other power is eligible for membership, members being elected by ballot. Every member is entitled to one vote for every complete sum of Rs. 50 paid by him as annual subscription.

The membership of the Association in 1921 numbered 95.

The following is the Committee for 1921 :—

Mr. J. A. Kay (*Chairman*), Capt E. V Sassoon (*Deputy Chairman*), Sir Dinshaw M. Petit, Bart , Sir Sassoon David, Bart , Sir Fazulbhoy Currimbhoy, Kt., The Hon'ble Sir Dinshaw E Wacha, Kt Sir Vithaldas D Thackersey, Kt, M.L.A Mr. Manmohandas Ramji, M.L.A. Mr. F. E. Dinshaw, Mr A Geddis, Mr. Mathradas Goculdas, Mr. H. M. Mehta, Mr. Tricumdas Gordhandas, Mr Narottam Morarji, Mr. Cowasji Jehangir, (Junior) C.I.E., O.B.E., M.L.C., Mr. Jehangir B Petit, M.L.C., Mr. N. B. Saklatwalla, Mr. H. H. Sawyer, Mr. S Taylor and Mr C. N. Wadia, C.I.E., M.L.C.

Mr. C. B. Sayer, *Secretary.*

The following are the Association's Representatives on public bodies :—

Indian Legislative Assembly : Sir Vithaldas D. Thackersey, Kt , M.L.A.

Bombay Legislative Council. Mr Jehangir B. Petit, M.L.C.

Bombay Port Trust: Sir Vithaldas D Thackersey, Kt., M.L.A.

City of Bombay Improvement Trust: Sir Vithaldas D. Thackersey, Kt., M.L.A.

Victoria Jubilee Technical Institute: Mr. Jehangir Bomanjee Petit.

Bombay Smoke Nuisances Commission Messrs. C. N. Wadia, C.I.E., M.L.C. and W. A. Sutherland.

Advisory Board of Sydenham College of Commerce and Economics : Mr. J. A. Kay.

Cotton Contracts Board : Messrs. A. Geddis and Manmohandas Ramjee., M.L.A.

Indian Merchants' Chamber.

The Bombay Indian Merchants' Chamber and Bureau was established in 1907 with the following objects :—"To encourage a friendly feeling and unanimity among the commercial men on all subjects involving their common good; to promote and protect the trade, commerce and manufactures of India and in particular to promote the general commercial interests of the Presidency of Bombay; to consider and deliberate on all questions affecting the rights of Indian Merchants, to represent to the Government their grievances, if any, and to obtain by constitutional methods the removal of such grievances ; to collect and compile and distribute in such manner as may be the most expedient for purposes of disseminating commercial and economic knowledge, all statistics and other information relating to trade, commerce and finance, specially India : as well as to form and maintain library, and generally to do all such matters as may promote the above objects in view; to arbitrate between parties willing to refer and abide by the judgment of the Chamber; to receive and decide references of matters of usage and custom in dispute, recording such decisions of future guidance and assisting by this and such other means, as the committee for the time being may think fit; to form a code of practice so as to simplify and facilitate the transaction of business."

The Chamber has not yet taken up the work of arbitration, measurements, etc.

The following bodies are connected directly and indirectly with the Chamber, though no public body is directly affiliated to it :—

The Bombay Native Piece-goods Association (which sends a large number of representatives);

The Grain Merchants' Association (which is a member);

The Hindustani Native Merchants' Association (which is a member);

The Bombay Rice Merchants' Association

The Bombay Fancy Piece-goods Association;

The Bombay Yarn, Copper and Brass Native Merchants' Association.

Under the Montagu-Chelmsford Reforms, the Chamber has the right of electing one representative on the Indian Legislative Assembly and one on the Bombay Legislative Council. The Chamber also has the right to elect a representative on the Board of the Sydenham College of Commerce and Economics, Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, *viz.*, Ordinary and Honorary. Ordinary members shall be (1) Resident members who pay Rs. 30 annual fee, except that if an Association joins as a member it shall have to pay an annual fee of Rs. 125, and (2) Mofussil members who pay Rs. 25 as annual fee. An ordinary member also pays an entrance fee of Rs. 50 on being elected. The Chamber has got 519 members.

Gentlemen distinguished for public services or eminent in commerce and manufactures or otherwise interested in the aims and objects of the Chamber may be elected as Honorary members by a General Meeting of the Chamber on the recommendation of the Committee and as such are exempted from paying subscriptions. They are not entitled to vote at any meeting of the Chamber nor they are eligible to serve on the Committee. They are, however, supplied all the publications of the Chamber free of charge.

The following are the office-bearers of the Chamber for the year 1920-21 :—

Chairman.—Mr Lalji Naranji.

Vice-Chairman.—Mr. Hansraj Pragji Thackersey.

Committee.—Mr. Purshottamdas Thakurdas C.I.E , M.B.E., Mr. Chunilal Mehta, M.L.C., Mr. Manmohandas Ramji, M.L.A., Mr. Jehangir Bomanji Petit, Sir Fazulbhoy Currimbhoy, Mr. Lallubhai Samaldas, C.I.E., Mr. Lakshmidas Ravji Tarsey, Sir Vithaldas D. Thackersey, Mr. Motilal Kanji, Mr. Fazul Ibrahim Rahimtulla, Mr S. R. Bomanji, Mr. Surajmal Lallubhai, Mr. Jamnadas Dwarkadas, Mr. Jethmal Narandas, Mr. Manu Subedar, Mr. Vallabhdas Chaturbhuj Shivji, Mr. S. N. Pochkhanawala, Mr. Mavji Govindji, Sir Dinshaw M. Petit,

Mr. Kikabhoy Premchand, Mr. Phiroze J. Billimoria, Mr. B. F. Madon, Mr. N. M. Muzumdar, Mr. Rewashankar Jugjivan, Mr. Velji Lakhamsey Napu, and Mr. Mathuradas Kanji Matani.

The following are the Chamber's representatives on various public bodies:—

Indian Legislative Assembly: Mr. Manmohandas Ramji, M.L.A.

Bombay Legislative Council.—Mr. Chunilal V. Metha, M.A., L.L.B., M.L.C.

Bombay Port Trust.—Mr. Manu Subedar, B.A., B.SC. (Econ.), F.S.S., Barrister-at-Law.

Advisory Board of the Sydenham College of Commerce.—The Hon. Sir D. E. Wacha.

The staff of the Chamber include:—

Secretary.—Mr. J. K. Mehta, M.A.

Assistant Secretaries:—Mr. S. M. Muzumdar, M.A., L.L.B., and Mr. K. M. Desai (B. Com.)

Auditor.—Mr. Devidas Vithaldas.

Chamber's Solicitors.—Messrs. Captain and Vaidya.

The Chamber publishes every month a journal in Gujarati giving information on commercial and industrial subjects and publishing all statistics considered important relating to trade and commerce of India.

Cotton Trade Association.

The Bombay Cotton Trade Association, Limited, was founded in 1876. The objects for which it was established were, *inter alia*, "to adjust disputes between persons engaged in the cotton trade, to establish just and equitable principles in the trade, to maintain uniformity to rules, regulations and usages in the trade, to adopt standards of classification in the trade, to acquire, preserve and disseminate useful information connected with the cotton interests throughout all markets and generally to promote the cotton trade of the City of Bombay and India and augment the facilities with which it may be conducted." In 1892 the Association was incorporated under the Indian Companies Act, 1882, with a Capital of Rs. 50,000, in 50 shares of Rs. 1,000 each. In 1917 the share capital was increased to Rs. 60,000. In addition to the shareholders (Members), the Association had in 1918 126 Associate Members. The affairs of the Company are managed by a Board of Directors not less than nine or more than twenty in number. The present Directorate is constituted as follows:—

Messrs. C. W. Du Breul, *Deputy Chairman*, V. A. Grantham, W. Ellis Jones, B. C. Reade, S. B. Samollys, J. A. Grant, G. Wesche-Dart, R. Cedraschi, P. J. Negreponte, and C. N. Wadia, C.I.E.

Secretary.—Mr. D. Mehta.

Bombay Native Piece-Goods Merchants' Association.

The objects of the Association are as follow:—

(*a*) To promote by creating friendly feelings and unity amongst the Merchants, the business of the piece-goods trade in general at Bombay, and to protect the interest thereof; (*b*) to remove, as far as it will be within the powers of the Association to do so, all the trade difficulties of the piece-goods business and to frame such line of conduct as will facilitate the trade; (*c*) to collect and assort statistics relating to piece-goods and to correspond with public bodies on matters affecting trade, and which may be deemed advisable for the protection and advancement of objects of the Association or any of them; and (*d*) to hear and decide disputes that may be referred to for arbitration.

The following are the office-bearers for the current year:—

Chairman—Mr. Manmohandas Ramji, M.L.A., J.P.

Deputy Chairman.—Mr. Motilal Kanji, B.A., L.L.B.

Hon. Joint Secretaries—Messrs. Goculdas Jivraj Dayal and Hurjiwan Walji.

Hon Treasurer.—Mr. Mulji Luxmidas.

Grain Merchants' Association.

The object of this body is "to promote the interests of the merchants and to put the grain and seeds trade on a sound footing." It is an influential body of large membership. The office holders for the current year are as follow.—

Chairman—Mr. Velji Lakhamsi, B.A., LL.B.

Vice-Chairman.—Mr Ramdas Narandas (The India Agency, Ltd).

Hony. Secretary—Mr. Jeiam Cooverji (Messrs. Shivnarain Baldeo)

Secretary.—Mr. Uttamram Ambaram, B.A., LL.B.

KARACHI.

The objects and duties of the Karachi Chamber of Commerce are set forth in terms similar to those of Bombay. Qualifications for membership are also similar. Honorary Membership may be conferred upon "any gentlemen interested in the affairs and objects of the Chamber" subject to election by the majority of votes of members. All new members joining the Chamber pay Rs. 500 entrance fee and the monthly subscription is Rs. 18. The subscription to the Chamber's periodical returns is at present fixed at Rs. 5 per month. The affairs of the Chamber are managed by a committee of ten members, consisting of a Chairman, Vice-Chairman and eight members, elected at the annual meeting of the Chamber as early in the year as possible. The Chamber elects a representative on the Bombay Legislative Council, three representatives on the Karachi Port Trust and two on the Karachi Municipality. There were last year 60 members of the Chamber. The following are the officers for the current year:—

Chairman.—Mr. F. Clayton, M.I.C. (Fleming Shaw & Co.).

Vice-Chairman.—Mr. H. F. P. Hearson (Bombay Company, Ltd.)

Committee.—Messrs. C. C. Demetriadi (Messrs. Ralli Bros), Geo. Gordon (Chartered Bank of India, Australia and China); F. R. Hawkes, O.B.E., (North Western Railway); H. G. Houghton (Messrs. Donald Graham & Co.), B. F. Jones (Messrs. Forbes, Forbes Campbell & Co.), D. J. Macgillvray (Messrs. Mackinnon, Mackenzie & Co.); J. G. Nicholson (Messrs. Sanday, Patrick & Co.), S. C. Woodward (Messrs. Clements, Robson & Co.)

Representative on the Bombay Legislative Council.—Mr. F. Clayton, M.L.C.

Representatives on the Karachi Port Trust.—Mr. C. C. Demetriadi; Mr. H. G. Houghton, Mr. S. C. Woodward.

Representatives on the Karachi Municipality.—Mr. F. R. Hawkes, O.B.E., Mr. S. Moore.

Secretary.—Major Alan Duguid, A.F.C., late R.A.F.

Public Measurer.—Captain H. A. Cary.

The following are the principal ways in which the Chamber gives a special assistance to members. The Committee take into consideration and give an opinion upon questions submitted by members regarding the custom of the trade or of the Port of Karachi. The Committee undertake to nominate European surveyors for the settlements of disputes "as to the quality or condition of merchandise in which both parties desire the Chamber to do so." When two members of the Chamber or when one member and a party who is not a member have agreed to refer disputes to the arbitration of the Chamber or of an arbitrator or arbitrators nominated by the Chamber, the Committee will undertake to nominate an arbitrator or arbitrators, under certain regulations. A public measurer is appointed under the authority of the Chamber to measure pressed bales of cotton, wool hides and other merchandise arriving at or leaving the port.

MADRAS.

The Madras Chamber of Commerce was founded in 1886. All merchants and other persons engaged or interested in the general trade, commerce and manufactures of Madras are eligible for membership. Any assistant signing a firm or signing *per pro* for a firm is eligible. Members who are absent from Madras but pay their subscriptions may be represented in the Chamber by their powers-of-attorney, as honorary members, subject to ballot. Honorary members thus elected are entitled to the full privilege of ordinary members. Election for membership as by ballot at a general meeting, a majority of two-thirds of the recorded votes being necessary to secure election. Every member pays an entrance fee of Rs. 100, provided that banks, corporate bodies and mercantile firms may be represented on the Chamber by one or more members and are liable for an entrance fee of Rs. 100 once in ten years each. The subscription shall not exceed Rs. 300 per annum, payable quarterly in advance, subject to reduction from time to time in accordance with the state of the Chamber's finances. Absentees in Europe pay no subscription and members temporarily absent from Madras pay one rupee per month. Honorary members are admissible to the Chamber on the usual conditions. Members becoming insolvent cease to be members but are eligible for re-election without repayment of the entrance donation.

The Chamber undertakes arbitrations and surveys, the granting of certificates of origin and the registration of trade marks. One of the rules for the last named is "that no trade mark on ticket shall be registered on behalf of an Indian firm trading under a European name."

The following publications are issued by the Chamber:—Madras Price Current and Market Report, Tonnage Schedule and Madras Landing Charges and Harbour Dues Schedule.

There are 50 members and seven honorary members of the Chamber in the current year and the officers and committee for the year are as follows:—

Chairman.—Mr. J. F. Simpson.

Vice-Chairman.—Mr. W. Alexander.

Committee.—Messrs. A. F. Buchanan, W. Lamb, T. M. Ross, F. E. L. Weike and W. A. Turner.

The following are bodies to which the Chamber are entitled to elect representatives, and the representatives elected for the year:—

Madras Legislative Council.—Mr. Jas. F. Simpson.

Madras Port Trust.—Mr. Jas. F. Simpson, Mr. W. Alexander, Mr. T. M. Ross and Mr. W. A. Turner.

Madras Municipal Corporation.—Mr. A. B. Bradshaw.

British Imperial Council of Commerce, London—Mr. A. L. Jackson (Europe).

Secretary.—Mr. H. E. H. Sladen.

Southern India Chamber.

The Southern India Chamber of Commerce has its Registered Office in Madras. The objects of the Chamber are those usual for such bodies, concerning the promotion of trade, especially in the Madras Presidency, and the interests of members. Special objects are stated to be:—

"To maintain a Library of books and publications of commercial interest, so as to diffuse commercial information and knowledge amongst its members.

"To establish Museums of commercial products or organise exhibitions, either on behalf of the Chamber or in co-operation with others."

There are two classes of members, permanent and honorary. The usual conditions as to eligibility for election prevail.

The right of electing two representatives to the Madras Port Trust was accorded to the Chamber by the Madras Port Trust Amend-

ment Act, 1915. Members of the Chamber hold seats in the Madras Legislative Council and the Chamber has also been accorded the right of electing a representative to that body. Under the Madras City Municipal Act, 1919, the Chamber has the right of electing two Councillors to the Madras Corporation.

President.—M. Jamal Mahomed Sahib Bahadur.

Vice-Presidents.—Dewan Bahadur Govindas Chathoorbhujadas and Rao Sahib M. C. T. Muthia Chetti.

Honorary Secretaries.—Mahomed Musa Sait and C. Gopala Menon.

Assistant Secretary.—C. Duraiswamy Aiyangar, B A.

UPPER INDIA CHAMBER.

The Upper India Chamber of Commerce is concerned with trade, commerce and manufactures in the United Provinces and has its registered office at Cawnpore. Members are elected by the Committee, subject to confirmation by the next general meeting of the Chamber. Gentlemen distinguished for public service, or eminent in commerce or manufactures, may be elected honorary members of the Chamber by the members in a General Meeting and such shall be exempted from paying any subscription to the Chamber. There is no entrance fee for membership, but subscriptions are payable as follows:—A firm company or association having its place of business in Cawnpore, Rs. 200 a year; an individual member, resident or carrying on business in Cawnpore, Rs. 100; firms or individuals having their places of business or residence outside Cawnpore pay half the above rates, but the maintenance of a branch office in Cawnpore necessitates payment of full rates.

The affairs and funds of the Chamber are managed by a Committee of ten members, which has power to constitute Local Committees, of from four to seven members each, at trade centres where membership is sufficiently numerous to justify the step. Such Local Committees have power to communicate only with the Central Committee.

The Chamber appoints arbitration Tribunals for the settlement and adjustment of disputes when invited to do so, members of the Tribunals being selected from a regular printed list of arbitrators.

The Chamber has in the present year 75 members, three honorary members and six affiliated members.

The following are the officers:—

President—Sir Thomas Smith, KT, V. D., M.L.C. (Muir Mills Co., Ltd.)

Vice-President—Mr S. H. Taylor (Empire Engineering Co., Ltd.).

Members.—Mr. C. T. Allen, C.I.E. (The British India Corporation, Ltd.), Mr A. W. Lilley, M.B.E. (The Cawnpore Woollen Mills Co.), Mr. A. A. Black, M.A. (The Victoria Mills Co., Ltd.), Mr. C. R. O'Malley (Messrs W. H. Brady & Co., Ltd.), Mr H. B. Saxby, M.L.C. (The Empire Engineering Co.), Mr N. Charles (The National Bank of India, Ltd.), Mr J. P. Srivastava, M.S.C. (The Western India Prospecting Syndicate, Ltd.) and Mr. H. H. Yule (The East Indian Railway Co.).

Secretary.—Mr. J. G. Ryan.

Head Clerk.—Mr. B. N. Ghosal.

PUNJAB.

The Punjab Chamber of Commerce has its headquarters at Delhi and exists for the care of mercantile interests on the usual lines in the Punjab, the North-West Frontier Province and Kashmir. There is a branch of the Chamber at Amritsar. Members are elected by ballot, the only necessary qualification being interest in mercantile pursuits. There is no entrance fee. The rate of subscription is Rs. 10 per month. The Chamber returns one member to a seat on the Reformed Punjab Legislative Council jointly with the Punjab Trades Association and one on the Municipal Corporation, Delhi and Amritsar.

The following are the Officers, Committee and Representatives on public bodies as at the end of November 1920:—

Chairman.—Mr. V. F. Gray (Messrs. R. J. Wood & Co., Delhi.)

Vice-Chairman.—Sardar Sobha Singh (Khalsa Spinning and Weaving Mills, Delhi.)

Committee.—Mr. V. F. Gray (Messrs. R. J. Wood & Co.); Sardar Sobha Singh (Khalsa Spinning and Weaving Mills); Mr. F. J. Pruce (Messrs. James Currie & Co., Delhi); Mr. J. C. Roberts (Messrs. Gutmann & Co., Delhi), Sardar Jaidev Singh (R. B. Boota Singh & Sons); Lala Shri Ram (Delhi Cloth and General Mills, Ltd.), Mr. P. Mukerjee (Messrs. P. Mukerjee & Co., Delhi); Lala Girdhari Lal (Amritsar); Lala Lachminarain (Messrs I. D. Lachminarain, Amritsar); Lala Motiram Mehra (Messrs. Motiram Mehra & Co., Amritsar), and Mr. Abdul Sattar S. M. Fazl, Ellahie, Delhi)

Representative on the Delhi Municipal Committee.—Lala Shri Ram (Delhi Cloth and General Mills, Ltd.)

Honorary Secretary—Mr. P. Mukerjee.

The Chamber is affiliated with the British Imperial Council of Commerce, London, and is represented in England by Sir James Walker, C.I.E., Alliance Bank of Simla, and Mr. H. C. Chalmers, National Bank of India, Ltd., London, and is a member of the Associated Chambers of Commerce of India and Ceylon, Calcutta.

UNITED PROVINCES.

The number of members on register is 135 (89 Local and 46 Mofussil). All the important commercial and industrial interests of the Provinces of Agra and Oudh are represented.

Committee.

President.—Rai Bahadur Lala Bishambhar Nath, M.L.A., Proprietor, Sri Krishna Ginning Factory and Director of the Punjab National Bank, Ltd., Cawnpore.

Vice-Presidents.—Dr. Murari Lal, M. B, Babu Sriram Khanna (Managing Director of Ramchandra Gursahaimul Cotton Mills Co., Ltd., Lucknow), Lala Ram Kumar (of Messrs. Ramkumar Rameshur Dass), Cawnpore.

Secretary.—Babu Vikramajit Singh, M.L.C., (Director of Ramchandra Gursahaimul Cotton Mills Co., Ltd., Lucknow)

Joint Secretary.—Mr. J. P. Srivastava (of the Western India Prospecting Syndicate, Cawnpore)

Members—Mr T. Wilberforce (of the Pioneer Mills, Ltd, Cawnpore); Babu Dwarka Pershad Singh, Cawnpore; Mahashey Kashi Nath, Cawnpore; Babu Behari Lal, Cawnpore; Lala Mahadeo Pershad (of Messrs. Phoolchand Fatehchand). Cawnpore; Mr. S M. Raza, (of Whitfield & Co.), Cawnpore; Lala Saligram, Cawnpore; Lala Jairamdass (of the Lyalpur Sugar Co.), Cawnpore; Mr. I. D. Varshanie (Propt. of the U. P. Glass Works), Bahjoi, Dist. Moradabad; Babu Gur Pershad (of Messrs. Bastiram Matadin), Cawnpore: Lala Jwahar Lal Jainy (of Messrs. Jainy Brothers), Cawnpore.

BURMA.

The Burma Chamber of Commerce, with headquarters at Rangoon, exists to encourage friendly feeling and unanimity among commercial men on all subjects involving their common good, to promote and protect trade, commerce and manufactures and, in particular, the general mercantile interests of the province, to communicate with public authorities, associations and individuals on all matters, directly or indirectly affecting these interests, and to provide for arbitration between parties willing to refer to, and abide by, the judgment of arbitrators appointed by the Chamber. The following are affiliated bodies:—

Burma Fire Insurance Association.

Burma Marine Insurance Agents' Association.

Rangoon Import Association.

The Chamber elects representatives to the following Public Bodies:—

Council of State.

Burma Legislative Council.

Rangoon Port Trust Board.

Rangoon Municipal Committee.

Victoria Memorial Park Trustees.

Pasteur Institute Committee.

Burma Boiler Commission.

Burma University Council.

Rangoon Development Trust.

Lord Haig's Officers' Association.

All British corporations, companies, firms or persons engaged or interested in mercantile pursuits, such as merchants, bankers, shipowners and brokers or who are connected with agriculture, mining, manufactures, insurance, railways, commerce, art, science or literature shall be eligible to become Chamber Members. Every non-British concern or person, similarly engaged or interested as indicated above, other than a subject of a State with which the British Empire was at War on September 19th, 1918, shall be eligible for election as an Associate Member. The annual subscription of each Chamber Member shall be Rs. 480 per annum and of each Associate Member Rs. 360 per annum. An entrance fee of Rs. 150 is payable by each new Member. Officials and others indirectly connected with the trade of the province or who may have rendered distinguished service to the interests represented by the Chamber may be elected by the Committee either on their own motion or on the suggestion of two Members as Honorary Members of the Chamber. Honorary Members are not required to subscribe to the funds of the Chamber.

The Chamber undertakes arbitrations in addition to its ordinary work. It does not publish any statistical returns.

Secretary.—Mr. C. A. Cuttriss, M.B.E, F.R.G.S, F.R.S.A.

Representative on the Council of State.—Sir Edgar Holberton, KT., C.B E.

Representative on the Burma Legislative Council.—A. B. Ritchie, Esq., M.L.C.

Representatives on the Rangoon Port Trust Board.—Messrs. J. Hogg, A. B. Ritchie, M.L.C., J. A. Swan, and A. J. Anderson, C.S.I.

Representative on the Rangoon Municipal Committee.—Mr. A. McKeand

Victoria Memorial Park Trustee.—Mr. J. Hogg.

Pasteur Institute Committee.—Mr. A. B. Ritchie, M.L.C.

Burma Boiler Commission.—Mr. C. A. Cuttriss, M.B E., F.R.G.S., F.R.S.A.

Burma University Council.—H. Smiles, Esq., M.A.

Rangoon Development Trust.—A. J. Anderson, Esq., C.S.I.

Lord Haig's Officers' Association.—W. T. Henry, Esq.

COCANADA.

The Cocanada Chamber of Commerce was established on 29th October, 1868.

The following are the office-holders of the Cocanada Chamber of Commerce, which has its headquarters at Cocanada, the chief port on the Coromandel Coast, north of Madras :—

Messrs W Stephens (Agent, Imperial Bank of India,) *Chairman.*
C Hodding (Coromandel Co., Ltd.), E H. D'Cruz (Wilson & Co.), A. Simson (Simson Bros), M. R. Ry. Rao Bahadur K. Suryanarayanamaurty Naidu Garu and G. M. Lake (Innes & Co.), G. W. Thompson (Shaw Wallace & Co), Max Boesch (Volkart Bros), P. Lefaucheur (Gordon Woodroffe & Co.), F. L. R. Bosworth (J. H. Vavasseur & Co), S. Deane (Bank of Madras, Cocanada.)

Secretary—Mr. J. A. Muller.

The rules of the Chamber provide "that by the term 'member' be understood a mercantile firm or establishment, or the permanent agency of a mercantile firm or establishment, or a society of merchants carrying on business in Cocanada, or other place in the Districts of Kistna, Godavari, Vizagapatam, and Ganjam, and duly electing according to the Rules of the Chamber, and that all such be eligible, but only members resident in Cocanada can hold office." Members are elected by ballot. The Committee, when called upon by disputing members or non-members of the Chamber, give their decision upon all questions of mercantile usage and arbitrate upon any commercial matter referred to them for final judgment. In either case a fee of Rs. 16 must accompany the reference.

The Committee consist of 3 members, including the Chairman, and the Committee are elected by ballot, the Chairman at the general meeting of January in each year, for a term of 12 months. The entrance fee for each member, whose place of business is in Cocanada, is Rs. 50 and for each member whose place of business is elsewhere is Rs. 25. The subscription for each member whose place of business is in Cocanada is Rs. 120 per annum, and for each member whose place of business is elsewhere is Rs. 60 per annum, payable quarterly in advance. Committee meetings are held on the 1st Tuesday in the month and general meetings on the 2nd Tuesday.

A weekly slip of current rates of produce freights, and exchange is drawn up by the Committee.

CEYLON.

The Ceylon Chamber of Commerce was established on the 25th March 1839 and was incorporated in 1895, with its headquarters at Colombo. All firms and persons engaged in the general trade of Ceylon are admissible as members and every person or firm desirous of joining the Chamber must be proposed by one member, seconded by another and balloted for by the whole Chamber. The affairs of the Chamber are conducted by a Board of Directors consisting of Chairman and Vice-Chairman and from 5 to 10 members.

The following is the membership of this Board at the present time :—

Mr. C. S. Burns (*Chairman*); Mr. W. Sutherland Ross (*Vice-Chairman*); Mr. P. E. Beeston; Hon'ble Sir J. Thomson Broom, Kt., Mr. W. Fraser, Mr. W. Philips, Hon'ble Mr. J. Lochore, Mr. R. M. Milne, Mr. W. F. Hutson, Hon'ble Mr. R. S. Philpott, and Mr. D. W. Watson,

Secretary.—Mr. A. Duncan, A.C.A.

Representative in the Legislative Council.—Sir J. Thomson Broom.

THE INDIAN INDUSTRIAL AND COMMERCIAL CONGRESS.

The credit of conceiving the idea of organizing an Indian Industrial Conference under the auspices of the Industrial Association of Western India belongs to the late Mr. M. G. Ranade. Discussion of questions relating to agriculture, finance, commerce and industry of the whole country by inviting experts in different branches, the formation of well informed public opinion on economical problems were the objects kept by Mr. Ranade

in view in convening this meeting. The first session of the Conference was held at Poona in August 1891, under the Presidency of Captain Beauclerk of Hyderabad and was attended by distinguished European and Indian gentlemen. Two more sessions of the Conference were held in 1892 and 1893. But owing to the elevation of Mr. M. G. Ranade to the High Court and his transfer to Bombay this movement came virtually to a standstill, until it was revived in 1905. The National Congress almost since its inception has given prominent attention to some of the principal economic questions and the famines of 1896-97 and 1899-1900 contributed not a little to push the economical problem to the forefront and resulted in the organization of three or four Industrial and Agricultural exhibitions between 1900 and 1905 under the auspices of the National Congress, which gave the people an opportunity to take stock of their gains and losses in the field of arts and industries and opened their eyes to their industrial backwardness. Small committees were appointed at these exhibitions to devise means for the revival of existing industries and also for the starting of new ones.

In the year 1905 the exhibition Committee of Benares took the important step of reviving the Industrial Conference organization. The first session was accordingly held under the distinguished presidency of the late Mr. R. C. Dutta. During the last fourteen years of its existence, this conference has been fortunate in securing very able and influential gentlemen to occupy the Presidential Chair.

It has succeeded in creating an intelligent and powerful public opinion on mercantile and commercial matters, and in bringing about an industrial awakening throughout the country. In order to add to its efficiency, one of the resolutions unanimously passed at the Delhi-sitting, entrusted the Standing Committee of the Conference for the year, with the onerous task of over-hauling its constitution with a view to its complete re-organization and the improvement of its driving capacity. The Committee, after very careful and anxious consideration have come to the conclusion that the larger interests of the country would be more effectively served by reducing to the minimum the duplication of existing machinery, and by concentrating the energy and resources of the country into as few channels as possible. It has therefore been decided to bring about an amalgamation between the Conference and the Indian Commercial Congress which was started in Bombay in the year 1915 with very much the same object as the Conference, thus uniting their forces, strengthening their resources, and more effectively focussing the views of the public on all matters and problems relating to the commerce and industry of the country.

CONSTITUTION—The objects of the Conference as laid down in its revised constitution are as follows :—

AIMS & OBJECTS.—The Indian Industrial and Commercial Congress shall attempt to promote, protect and develop agriculture, commerce, manufactures and trade of India, on sound lines and to introduce new industries wherever possible.

(*a*) By holding annual sessions of all Chambers of Commerce to deliberate upon and discuss various commercial, industrial, economic and agricultural questions affecting the vital interests of India and to voice the views of the country by passing resolutions.

(*b*) By holding Conferences and meetings to deliberate upon and discuss the economic, agricultural and industrial needs and problems affecting the whole country.

(*c*) By collecting correct statistics and other information on the above subjects

(*d*) By disseminating the information so collected through the medium of books, pamphlets or leaflets.

(*e*) By making representations to the various departments of British Government, to the Railway Companies, the Rulers of Indian States and Industrial and Commercial bodies or Associations on all matters pertaining to or bearing on agriculture, manufactures, trade and commerce of the country.

(*f*) By the formation of industrial and commercial Associations in the various parts of the country, where they are non-existent.

In pursuance of the above objects, 14 sessions of the Indian Industrial Conference and one session of the Indian Commercial Congress were held before the amalgamation. The Report of each session contains the proceedings and the papers submitted to each Conference and covers over 500 pages of closely printed matter. The first joint session was held in Bombay in January 1920 in which important resolutions were passed. The office also has compiled the following books:—The Directory of Indian Goods and Industries (6th Edition) containing the names and addresses of manufacturers of and dealers in the Indian made goods, Indian Banks, etc. The Directory of Technical Institutions in India (2nd edition) gives the fees charged and other particulars relating to Agricultural, Commercial and Technical schools and colleges in India. The Guide to Modern Machinery gives the addresses of makers of machinery for starting three hundred different industries.

In addition to the educative work, the office fulfils the functions of a **Bureau of Economic Intelligence.** Inquiries of the following nature are received in the office. Small capitalists and gentlemen of limited means seek the advice of the Central Office for starting small cottage industries, which do not require a large outlay of money or the use of expensive or intricate machinery. Persons wishing to start soap or candle works, varnish making and similar chemical industries, ask for an estimate of the cost of machinery and plant for these different concerns, as well as rates for the chemicals required by them and the names of the firms from whom they can obtain the supplies. Advice is sometimes sought by Indian States and private individuals anxious to start plantations of Ramie, and other fibre producing plants and the cultivation of Rubber and other economic products. Parents and guardians of

students have addressed the Office for information in connection with institutions both in India and in foreign countries, where the young men can get training suited to them in Electrical Engineering and other technical courses. Information is also supplied regarding Indian experts in various branches. Small concerns which have already commenced to place their goods in the market, expect the Office of the Industrial Conference to help them in pushing forward the sale of their goods by prevailing upon well-known merchants, to help them by guaranteeing the purchase of their goods up to a certain quantity every year.

The Conference wishes to take in hand the following projects:—

(1) To compile a list of Indian as well as of foreign experts, who by their training either here or in foreign countries and practical experience in different Industrial and Manufacturing branches are capable of rendering assistance to the capitalists and others intent on starting any new industry, or reviving old or existing concerns requiring expert aid.

(2) To organize a Commercial Museum at Bombay to display samples of indigenous and foreign industrial products, models of machinery, raw materials and artware.

The fees for different classes of Membership will be as shown below commencing with the year 1919:—

	Rs.
Patron	1,000 or above
Life Member	250 ,,
Donors	50 ,,
Ordinary member ..	10.

Honorary Joint Secretaries.—

Mr. Ambalal Sarabhai, Mr. Manu Subedar, B.A., B.Sc (Econ.), London, and Mr. J. K. Mehta, M.A.

Office.—19, Bank Street, Fort, Bombay

* The Peoples of India.

It is essential to bear in mind, when dealing with the people of India, that it is a continent rather than a country. Nowhere is the complex character of Indians more clearly exemplified than in the physical type of its inhabitants. No one would confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc., nor does it take long to carry the differentiation much farther. The typical inhabitants of India—the Dravidians—differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have settled in the country for countless ages and that their present physical characteristics have been evolved locally. They have been displaced in the North-West by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghals, and in the North-East by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is borderland where the contiguous races have intermingled.

The people of the Indian Empire are divided by Sir Henry Risley (Caste, Tribe and Race, Indian Census Report, 1901: the Gazetteer of India, Ethnology and Caste, Volume I, Chapter 6) into seven main physical types. There would be eight if the Andamese were included, but this tiny group of Negritos may be disregarded.

The Turko-Iranian, represented by the Baloch, Brahui and Afghans of Baluchistan and the North-West Frontier Province. Probably formed by a fusion of Turki and Persian elements, in which the former predominate. Stature above mean; complexion fair; eyes mostly dark but occasionally grey; hair on face plentiful; head broad, nose moderately narrow, prominent, and very long. The feature in these people that strikes one most prominently is the portentious length of their noses, and it is probably this peculiarity that has given rise to the tradition of the Jewish origin of the Afghans.

The Indo-Aryan occupying the Punjab, Rajputana, and Kashmir, and having as its characteristics members the Rajputs, Khattris, and Jats. This type, which is readily distinguishable from the Turko-Iranian, approaches most closely to that ascribed to the traditional Aryan colonists of India. The stature is mostly tall; complexion fair; eyes dark; hair on face plentiful, head long; nose narrow, and prominent, but not specially long.

The Scytho-Dravidian, comprising the Maratha Brahmans, the Kunbis, and the Coorgs of Western India. Probably formed by a mixture of Scythian and Dravidian elements. This type is clearly distinguished from the Turko-Iranian by a lower stature, a greater length of head, a higher nasal index, a shorter nose, and a lower orbito-nasal index. All of these characters, except perhaps the last, may be due to a varying degree of intermixture with the Dravidians. In the higher groups the amount of crossing seems to have been slight; in the lower the Dravidian elements are more pronounced.

The Aryo-Dravidian or Hindustani, found in the United Provinces, in parts of Rajputana, and in Bihar and represented in its upper strata by the Hindustani Brahman and in its lower by the Chamar. Probably the result of the intermixture, in varying proportions, of the Indo-Aryan and Dravidian types. The head-form is long with a tendency to medium; the complexion varies from lightish brown to black; the nose ranges from medium to broad, being always broader than among the Indo-Aryans; the stature is lower than in the latter group, and usually below the average according to the scale. The higher representatives of this type approach the Indo-Aryans, while the lower members are in many respects not very far removed from the Dravidians. The type is essentially a mixed one, yet its characteristics are readily definable, and no one would take even an upper class Hindustani for a pure Indo-Aryan or a Chamar for a genuine Dravidian. The distinctive feature of the type, the character which gives the real clue to its origin and stamps the Aryo-Dravidian as racially different from the Indo-Aryan is to be found in the proportions of the nose.

The Mongolo-Dravidian, or Bengali type of Lower Bengal and Orissa, comprising the Bengal Brahmans and Kayasthas, the Mahomedans of Eastern Bengal, and other groups peculiar to this part of India. Probably a blend of Dravidian and Mongoloid elements, with a strain of Indo-Aryan blood in the higher groups. The head is broad; complexion dark; hair on face usually plentiful; stature medium; nose medium, with a tendency to broad. This is one of the most distinctive types in India, and its members may be recognised at a glance throughout the wide area where their remarkable aptitude for clerical pursuits has procured them employment. Within its own habitat the type extends to the Himalayas on the north and to Assam on the east, and probably includes the bulk of the population of Orissa; the western limit coincides approximately with the hilly country of Chota Nagpur and Western Bengal.

The Mongoloid, type of the Himalayas, Nepal, Assam, and Burma, represented by the Kanets of Lahul and Kulu; the Lepchas of Darjeeling and Sikkim; the Limbus, Murmis and Gurungs of Nepal; the Bodo of Assam; and the Burmese. The head is broad; complexion dark, with a yellow tinge; hair on face scanty; stature short or below average; nose fine to broad; face characteristically flat; eyelids often oblique.

The Dravidian type extending from Ceylon to the valley of the Ganges, and pervading Madras, Hyderabad, the Central Provinces, most of Central India and Chota Nagpur. Its most characteristics representatives are the Paniyans of Malabar and the Santals of Chota Nagpur. Probably the original type of the population of India, now modified to a varying extent by the admixture of Aryan, Scythian, and Mongoloid elements. In typical specimens the stature is short or below mean; the complexion very dark, approaching black; hair plentiful, with an occasional tendency to curl; eyes dark; head long; nose very broad, sometimes depressed at the root, but not so as to make the face appear

* The Census was taken in 1921. Provisional figures only are available and these are given at the end of this article.

	1911.	1901.	1891.	1881.	1872.
INDIA	315,156,396	294,361,056	287,314,671	253,896,330	206,162,360
PROVINCES	244,267,542	231,605,940	221,240,836	198,882,817	185,163,435
Ajmer-Merwara	501,395	476,912	542,358	460,722	396,331
Andamans and Nicobars	26,459	24,649	15,609	14,628	....
Assam	6,713,635	5,841,878	5,477,302	4,907,792	4,150,769
Baluchistan	414,412	382,106	....	....	....
Bengal	45,483,077	42,141,477	39,089,632	36,316,728	34,119,465
Bihar and Orissa	34,490,084	33,242,783	32,876,557	30,988,320	26,486,482
Bihar	23,752,969	23,360,212	23,581,538	22,418,367	19,735,627
Orissa	5,131,753	4,982,142	4,666,227	4,343,964	3,603,156
Chota Nagpur	5,605,362	4,900,429	4,628,792	4,225,989	3,147,699
Bombay (Presidency)	19,672,642	18,559,650	18,878,471	16,494,533	16,301,362
Bombay	16,113,042	15,304,766	15,959,292	14,042,621	14,075,508
Sind	3,513,435	3,210,910	2,875,100	2,875,100	2,206,565
Aden	46,165	43,974	44,079	34,860	19,289
Burma	12,115,217	10,490,624	7,722,053	3,736,771	2,747,148
Central Provinces and Berar	13,916,308	11,971,452	13,048,972	11,943,363	9,951,268
Central Provinces	10,859,146	9,217,436	10,151,481	9,270,690	7,723,614
Berar	3,057,162	2,754,016	2,897,491	2,672,673	2,227,654
Coorg	174,976	180,607	173,055	178,302	168,312
Madras	41,405,404	38,229,654	35,644,428	30,841,154	31,230,622
North-West Frontier Province (Districts and Administered Territories).	2,196,933	2,041,534	1,857,519	1,575,943	17,609,672
Punjab	19,974,956	20,330,337	19,009,368	17,274,597	17,609,672
United Provinces of Agra and Oudh	47,182,044	47,692,277	46,905,512	44,149,959	42,002,004
Agra	34,624,040	34,859,109	34,254,588	32,762,127	30,780,961
Oudh	12,558,004	12,833,168	12,650,924	11,387,832	11,221,043

flat. This race, the most primitive of the Indian types, occupies the oldest geological formation in India, the medley of forest-clad ranges, terraced plateau, and undulating plains which stretches roughly speaking, from the Vindhyas to Cape Comorin. On the east and the west of the peninsular area the domain of the Dravidian is conterminous with the Ghats, while further north it reaches on one side to the Aravallis, and on the other to the Rajmahal Hills. Where the original characteristics have been unchanged by contact with Indo-Aryan or Mongoloid people, the type is remarkably uniform and distinctive. Labour is the birthright of the pure Dravidian whether hoeing tea in Assam, the Duars, of Ceylon, cutting rice in the swamps of Eastern Bengal or doing scavenger's work in the streets of Calcutta, Rangoon and Singapore, he is recognizable at a glance by his black skin, his squat figure, and the negro-like proportions of his nose. In the upper strata of the vast social deposit which is here treated as Dravidian these typical characteristics tend to thin and disappear, but even among them traces of the original stock survive in varying degrees.

It must, however, be clearly understood that the areas occupied by these various types do not admit of being defined as sharply as they must be shown on an ethnographic map. They melt into each other insensibly; and, although at the close of a day's journey from one ethnic tract to another, an observer whose attention had been directed to the subject would realise clearly enough that the physical characteristics of the people had undergone an appreciable change, he would certainly be unable to say at what particular stage in his progress the transformation had taken place.

Contrasts.—The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus, there are millions of Mahomedans, Animists, Buddhists, Jains, Sikhs, and Christians. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south cousin marriage is prescribed and even closer alliances are sometimes permitted. As a rule, female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilisation are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; at the other various primitive aboriginal tribes such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vermin and jungle products.

MAIN STATISTICS OF THE INDIAN EMPIRE.

According to the revised areas adopted in the Census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represent the area of the Sunderbans, or swampy littoral of the Ganges delta, which was left out of account at previous enumerations. Finally the Frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901.

Population Divisions.—The provinces under British administration comprise 1,093,074 square miles, or 60·6 per cent. of the total. The remainder is included in the Native States. The total population is 315,156,396, of which British territory contains 244,267,542, or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent.

Comparisons with Europe.—These stupendous figures can be grasped only by contrast. The Indian Empire is equal to the whole of Europe, except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar and Orissa than Italy; and Hyderabad and Kashmir than Great Britain excluding Yorkshire.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal, with the States attached to them, both have as many inhabitants as the British Islands, Bihar and Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt; Central India and Rajputana as Scotland and Ireland combined; and Assam as Belgium.

Density.—In the whole Empire there are on the average 175 persons to the square mile, or much the same as Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is identical with that in Spain.

There are great local variations in density. In nearly two-thirds of the districts, and States, the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile covers two-fifths of the total area, but contains only one-eleventh of the population.

Causes of Density.—The productiveness of the soil is the main factor in determining the density of the Indian people. The most thickly peopled tracts are the level plains where practically every inch of the land is fit for tillage. This is notably the case in Bengal and Bihar and the United Provinces East. The next most densely peopled tracts are the low-lying plains along the sea coast in the southern part of the peninsula. In the United Provinces West and the Punjab East the configuration of the surface is equally favourable; the rainfall is more scanty and less

	1911.	1901.	1891.	1881.	1872.
STATES AND AGENCIES	70,888,854	62,755,116	66,073,835	55,013,513	20,998,925
Assam State (Manipur)	346,222	284,465	....	221,070	....
Baluchistan States	420,291	428,640	....	....	....
Baroda State	2,032,798	1,952,692	2,415,396	2,182,158	1,997,598
Bengal States	822,565	740,299	716,310	698,261	567,827
Bihar and Orissa States	3,945,209	3,314,474	3,028,018	2,410,611	1,723,900
Bombay States	7,411,675	6,908,559	8,081,950	6,937,893	6,797,970
Central India Agency	9,356,980	8,497,805	10,136,403	9,261,907	....
Central Provinces States	2,117,002	1,631,140	1,712,562	1,387,294	928,116
Hyderabad State	13,374,676	11,141,142	11,537,040	9,845,594	....
Kashmir State	3,158,126	2,905,578	2,543,952	....	....
Madras States	4,811,841	4,188,086	3,700,622	3,344,849	3,289,392
Mysore State	5,896,193	5,539,399	4,943,604	4,186 188	5,055,402
N.-W. F. Province (Agencies and Tribal areas)	1,622,094	83,962	....	....	....
Punjab States	4,212,794	4,424,398	4,263,280	3,861,683	....
Rajputana Agency	10,530,432	9,853,366	12,171,749	9,934,255	....
Sikkim State	87,920	59,014	30,458	....	....
United Provinces States	832,036	802,097	792,491	741,750	6,38,720

regular; but it is supplemented in many parts by water from the canals. The natural divisions which contain the coast districts of Orissa and north Madras, with a rainfall of 50 inches, has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip, between the littoral and the hills, the density is as great as in parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse population in several more or less level tracts such as Gujarat, Rajputana East and Central India West, and the North-West dry area. In Assam there are extensive tracts of hill and jungle and sandy stretches in the strath of the Brahmaputra River, where permanent cultivation is out of question. The agricultural returns show that three-quarters of the whole area is cultivable but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

TOWNS AND VILLAGES.

The definition of a town in the Indian census statistics includes every municipality; all Civil Lines not included within municipal limits; every cantonment; every other continuous collections of houses inhabited by not less than 5,000 persons, which may be treated as a town for census purposes. Only 9·5 per cent. of the population of India are found in towns as defined above, compared with 78·1 per cent. in England and Wales and 45·6 per cent. in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges from 18 per cent. in Bombay to only 3 per cent. in Assam. The urban population of Upper India is much larger than it otherwise would be because of the numerous old capitals which are found there. In the future the main factors will be the expansion of trade and industrial development.

Sex in Towns.—In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

Religion in Towns.—Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains, the proportion is nearly one-third; and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Mahomedans who form the bulk of the population. Of the Mahomedans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Mahomedans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection for town-life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

Urban and Rural.—The proportion of the urban to the total population has fallen during the decade from 9·9 to 9·5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in town than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns, especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone away. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

Urban Tendencies.—We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new and more or less local visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. The increasing trade of the country and the improvements in railway communications also encourage the growth of towns. Not only are the great seaports attracting an ever-growing population, but various inland towns are benefiting from the same cause. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population.

SUMMARISED GROWTH OF THE INDIAN POPULATION.

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+). Decrease (—).
INDIA	+20,795,340	+7,046,385	+33,418,341	+47,733,970	+108,994,036
PROVINCES	+12,661,602	+10,365,104	+22,358,019	+13,719,382	+59,104,107
Ajmer-Merwara	+24,483	—65,446	+81,636	+64,391	+105,064
Andamans and Nicobars	+1,810	+9,040	+ 981	....	....
Assam	+871,757	+364,576	+569,510	+757,023	+2,562,866
Baluchistan	+32,306	....	....	....	....
Bengal	+3,341,600	+3,051,845	+2,772,904	+2,197,263	+11,363,612
Bihar and Orissa	+1,747,301	+366,226	+1,888,237	+4,501,838	+8,003,602
Bihar	+302,757	—221,326	+1,163,171	+2,632,740	+4,017,342
Orissa	+149,611	+315,915	+322,263	+740,308	+1,528,597
Chota Nagpur	+704,933	+271,637	+402,803	+1,078,290	+2,457,663
Bombay (Presidency)	+1,112,992	—318,821	+2,383,933	+193,176	+3,371,280
Bombay	+808,276	—654,526	+1,916,671	—32,887	+2,037,534
Sind	+302,525	+335,810	+458,043	+210,492	+1,306,870
Aden	+2,191	—105	+9,219	+15,571	+26,876
Burma	+1,624,593	+2,768,571	+3,985,282	+989,623	+9,368,069
Central Provinces and Berar	+1,944,856	—1,077,520	+1,105,609	+1,992,095	+3,965,040
Central Provinces	+1,641,710	—934,045	+880,791	+1,547,076	+3,135,532
Berar	+303,146	—143,475	+224,818	+445,019	+829,508
Coorg	—5,631	+7,552	—5,247	+9,990	+6,664
Madras	+3,173,730	+2,585,226	+4,803,274	—389,468	+10,174,782
North-West Frontier Province (Districts and Administered Territories).	+155,399	+184,015	+281,576	+1,240,868	+4,562,217
Punjab	—355,381	+1,320,969	+1,734,771		
United Provinces of Agra and Oudh	—510,233	+786,765	+2,755,553	+2,147,955	+5,180,040
Agra	—235,069	+604,521	+1,492,461	+1,981,166	+3,843,079
Oudh	—275,164	+182,244	+1,263,092	+166,789	+1,336,961

CITIES.

The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. According to this standard there are in India only 30 cities, with a population of 7,075,782, or 2·2 per cent. of the population. Here there is an extraordinary difference between the Indian conditions and those of Western countries. In England the cities contain 45 per cent of the total population in Germany 21, and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9·5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India the growth will be more rapid in the future than it has been. The population of cities has risen since 1872 by 64 per cent. and the net increase, comparing like with like, is 42 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent.and then Madura and Howrah with 158 & 113 per cent respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent.

Calcutta.—In speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,043,307 inhabitants,or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal Government. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it has as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24 Parganas (88,000), Hooghly (48,000) and Midnapur (29,000). The volume of immigration is equally great in the suburbs and Howrah.

The first regular census of Calcutta proper taken in 1872 showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11·4 per cent. was recorded. In 1901 here was a further increase of 24·3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5·7 per cent. The falling off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45·3 per cent.

Bombay—which has now a population of 979,445 was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780, 180,000 in 1814 and 236,000 in 1836. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821, 764. In the next decade plague, which first appeared in September 1896, caused a serious set-back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent. but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the Holi holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts; more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

Madras.—Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying and their place is not being taken by factories of the modern type. Apart from its being the headquarters of the Local Government, Madras owes whatever importance it possesses to its position as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about one per cent. in the number of persons born in the city, but fewer of them

SUMMARISED GROWTH OF THE INDIAN POPULATION—*contd.*

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+), Decrease (—).
STATES AND AGENCIES	+8,133,738	—3,318,719	+11,060,322	+34,014,588	+49,889,929
Assam State (Manipur)	+61,757	....	....	....	....
Baluchistan States	—8,349	....	....	....	....
Baroda State	+80,106	—462,704	+233,238	+184,560	+35,200
Bengal States	+82,266	+23,989	+18,049	+130,434	+254,738
Bihar and Orissa States	+630,735	+286,456	+617,407	+686,711	+2,221,309
Bombay States	+503,116	—1,173,391	+1,144,057	+139,923	+613,705
Central India Agency	+859,175	—1,638,598	+874,496	....	....
Central Provinces States	+485,862	—81,422	+325,268	+459,178	+1,188,886
Hyderabad State	+2,233,534	—395,898	+1,691,446	....	....
Kashmir State	+252,548	+361,626	....	....	....
Madras States	+623,755	+487,464	+355,773	+55,457	+1,522,449
Mysore State	+266,794	+595,795	+757,416	—869,214	+750,791
N.-W. F. Province (Agencies and Tribal areas) .	+1,538,132	....	....	....	....
Punjab States	—211,604	+161,118	+401,597	....	....
Rajputana Agency	+677,066	—2,318,383	+2,227,494	....	....
Sikkim State	+28,906	+28,556	....	....	....
United Provinces States	+29,939	+9,606	+50,741	+103,030	+193,316

have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

Hyderabad.—Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its population is shown in the local Census Report as 500,623. Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside.

HOUSES AND FAMILIES.

Generally speaking it may be said that the labouring classes in India live in one, or at the most two, single room huts. The home of a well-to-do peasant consists of a public sitting room and a cook room and several apartments which are arranged round and open on to a courtyard. In spite of the joint family system the number of houses corresponds very closely to the number of families in the European sense. The total number of houses is 63·7 million, and there are 64·6 million married females aged 15 and over. Except amongst the higher castes who form but a small fraction of the total population the joint family system is not nearly so common as is frequently supposed. Where it is in vogue, there is often a strong disruptive tendency. In the towns and cities owing to the high rents, the unit for all below the middle class is the room, not the house.

	Average population per house
1881	5·8
1891	5·4
1901	5·2
1911	4·9

MOVEMENT OF THE POPULATION.

According to the census returns, the total population of India has increased by 7·1 per cent. during the last decade, and by 52·9 per cent. since 1872, but the real gain since the latter date is very much less than this. Large tracts of country, including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which were omitted from the census returns of 1872, were included in those of 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and tribal areas in the North-West Frontier Province, together with a few smaller areas, were included within the scope of the enumeration. The real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than half the increase which has taken place in the same period amongst the Teutonic nations of Europe, but it considerably exceeds that of the Latin nations. In France the population has grown by less than 7 per cent. since 1870, but this is because of its exceptionally low birth-rate. In India the birth-rate is far higher than in any European country; and it is the heavy mortality especially amongst infants, which checks the rate of increase.

Famine and Disease.—In addition to the causes which ordinarily govern the movement of the population, India is subject to two special factors—famine and epidemic disease. The decade preceding the census of 1911 was free from widespread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and causing actual famine in the United Provinces and in a few districts elsewhere. Prices ruled high in most years and there was an extension of special crops, such as jute and cotton, which are more profitable to the cultivator than food grains. It was on the whole a period of moderate agricultural prosperity. From the point of view of public health, the censal period would have been an average one, but for the ravages of plague. Breaking out in Bombay in 1896, it has by March 1901 caused a recorded mortality of half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1901 to 1·3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6·5 millions of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay, taken together. The disease fortunately has failed to establish itself in Bengal, Assam, and on the East Coast and in the extreme south of the Peninsula. This however is only the recorded mortality; in time of epidemic the reporting agency breaks down and large numbers of deaths escape registration. Plague attacks women more than men, and people in the prime of life more than the young and old. If plague is omitted, and it is assumed that the mortality of the decade would otherwise have remained normal, the population of the census of 1911 would have been greater than it was by at least 6·5 millions. In other words, the population would have increased by 9·3 instead of 7·1 per cent.

General Conclusions.—The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 37 per cent. since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back. In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9·1 per cent. over about nine-tenths of the area

	1911.	1901	1891	1881	1872.
CALCUTTA AND FORT *	896,067	847,796	682,305	612,307	633,009
BOMBAY	979,445	776,006	821,764	773,196	644,405
MADRAS AND CANTONMENT	518,660	509,346	452,518	405,848	397,552
Agra and Cantonment	185,449	188,022	168,662	160,203	149,008
Ahmedabad and Cantonment	216,777	185,889	148,412	127,621	119,672
Allahabad and Cantonment	171,697	172,032	175,246	160,118	143,693
Amritsar and Cantonment..	152,756	162,429	136,766	151,896	135,813
Bangalore Civil and Military Station †	100,834	89,599	100,081	93,540	81,810
Bareilly and Cantonment	129,462	133,167	122,837	115,138	104,533
Benares and Cantonment	203,804	213,079	223,375	218,573	178,300
Cawnpore and Cantonment	178,557	202,797	194,048	155,369	125,877
Dacca	108,551	89,733	81,585	78,369	68,595
Delhi and Cantonment	232,837	208,575	192,579	173,393	154,417
Howrah	179,006	157,594	116,606	90,813	84,069
Hyderabad and Cantonment	500,623	448,466	415,039	367,417	.....
Jaipur	137,098	160,167	158,787	142,578	.....
Jubbulpore and Cantonment	100,651	90,533	84,682	76,023	55,469
Karachi and Cantonment	151,903	116,663	105,199	73,560	56,753
Lahore and Cantonment	228,687	202,964	176,854	157,287	125,413
Lucknow and Cantonment	259,798	264,049	273,028	261,303	284,779
Madura	134,130	105,984	87,428	73,807	51,987
Mandalay and Cantonment	188,209	183,816	188,815	.....	.....
Meerut and Cantonment	116,227	118,129	119,390	99,565	81,386
Nagpur	101,415	127,734	117,014	98,299	84,441
Patna	136,153	134,785	165,192	170,654	158,900
Poona and Cantonment	158,856	153,320	161,390	129,751	118,886
Rangoon and Cantonment..	293,316	245,430	182,080	134,176	98,745
Srinagar and Cantonment	126,344	122,618	118,960	....	.....
Surat and Cantonment	114,868	119,306	109,229	109,844	107,855
Trichinopoly and Cantonment	123,512	104,721	190,609	84,449	76,530

* The above figures for Calcutta exclude the population of Cossipore-Chitpur, Manicktola and Garden Reach. These places have a separate Municipal administration, but for all practical purposes they form an integral part of Calcutta. So also does Howrah except that it lies on the opposite bank of the Hoogly. If the first-mentioned Municipalities be added, the population of Calcutta rises to 1,043,307. If Howrah also be included, it comes to 1,222,313.

† Bangalore City and Bangalore Civil and Military Station are structurally a single unit, but for the purpose of the census they have been treated as separate places.

with three quarters of the total population, and a loss of 5·3 per cent. in the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and popn ation, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7 per cent. Apart from this, in ordinary circumstances a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. The net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles, with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

MIGRATION.

In India there are two currents of migration—minor and major. The chief of the minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own. Of the 26·5 million natives of India who were enumerated in a district other than that in which they were born, 16·5 millions, or 62 per cent. were born in a district adjoining that in which they were enumerated. The major currents of migration are governed by economic conditions. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana, and of immigration into Bengal, Assam and Burma. Owing to its fertile soil, Bengal is able to support practically the whole of its dense indigenous population by agriculture. It is necessary therefore to man the jute mills by imported labour, as also the tea gardens of Darjiling and Jalpaiguri and to draw the general labour supply from outside. In Bengal the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are Natives of a district in Bihar and Orissa, or Assam, contiguous to the Bengal district in which they were enumerated. Assam and Burma are sparsely populated and the land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. The tea gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. In Assam 12·5 per cent. and in Burma 5 per cent. of the population are immigrants. On an average 51,000 labourers and dependants go each year to the tea gardens of Assam. In Burma, Madras supplies labourers for the rice-milling, oil and other industries, whilst many coolies flock into the province from Chittagong, chiefly for the rice harvest. The net loss to Bihar and Orissa on account of migration is about 1·5 millions. The United Provinces sustain a net loss of about 800,000 from migration, chiefly in the direction of Bengal. Madras being very backward from an industrial point of view, there is no great local demand for labour. At the same time there is an exceptionally large population of the "untouchable" castes, who have no scruples about seeking their livelihood oversea. It provides Ceylon with labour for its plantations, Burma with labour for its industries, and the Federated Malay States with labour for their rubber plantations. The enterprising Marwari traders of Rajputana have penetrated to all parts of India and are to be found in very important bazars throughout Bengal and even in Assam. Bombay is industrially more advanced than Bengal, but as its soil is less productive there is a large local supply of labourers, chiefly from the southern coast strip called the Konkan. The United Provinces give more than four times as many labourers to Bengal as to Bombay. As for the migration between British India and Native territory, it involves a loss of 135,000 to the Native States.

Asiatic Immigration.—Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in Northern India. The rest were cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. These Cabuli pedlars cause great trouble in Bengal by their truculence. The number of Chinese is 80,000. Most of these are found in Burma, but the Chinaman is making his way into Bengal, where he is appreciated as a shoemaker and carpenter. From Arabia come 23,000 immigrants, chiefly to Bombay.

Non-Asiatic Immigration.—The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,860 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626 were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry. The number of females born in the British Islands and enumerated in India has risen during the decade from 14,663 to 19,494. The figures for other European countries do not call for any special comment.

Emigration from India.—The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds, the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China

STATISTICS OF RELIGIONS.

Religion.	India.	British Provinces	Native States.
INDIA	315,156,396	244,267,542	70,888,854
Hindu	217,586,892	163,621,431	53,965,461
Brahmanic	217,337,943	163,381,380	53,956,563
Arya	243,445	234,841	8,604
Brahmo	5,504	5,210	294
Sikh	3,014,466	2,171,908	842,558
Jain	1,248,182	458,578	789,60
Buddhist	10,721,453	10,644,409	77,044
Zoroastrian (Parsi)	100,096	86,155	13,941
Musalman	66,647,299	57,423,889	9,223,410
Christian	3,876,203	2,492.284	1,383,919
Jew	20,980	18,524	2,456
Animistic	10,295,168	7,348,024	2,947,144
Minor Religions and Religion not returned	37,101	2,340	34,761
Not enumerated by Religion	1,608,556	....	1,608,556

POPULATION ACCORDING TO RELIGION AND EDUCATION (CENSUS OF 1911).

Religions.	Total Population.	Illiterate.	Literate.	Literate in English.
Males.				
Hindu	110,865,731	99,642,597	11,223,134	1,013,596
Sikh	1,734,773	1,550,610	184,163	11,490
Jain	643,553	324,968	318,585	13,030
Buddhist	5,286,142	3,151,761	2,134,381	21,767
Parsi	51,123	11,128	39,995	25,334
Muhammadan	34,709,365	32,319,599	2,389,766	176,051
Christian	2,010,724	1,422,154	588,570	252,591
Animistic	5,088,241	5,034,408	53,833	1,521
Minor and Unspecified	28,818	22,430	6,388	2,981
Total Males	160,418,470	143,479,655	16,938,815	1,518,361
Females.				
Hindu	106,720,714	105,905,904	814,810	23,659
Sikh	1,279,667	1,262,387	17,280	238
Jain	604,629	580,509	24,120	209
Buddhist	5,435,086	5,117,748	317,338	1,383
Parsi	48,973	17,755	31,218	8,347
Muhammadan	31,883,812	31,746,005	137,807	3,940
Christian	1,865,472	1,613,177	252,295	112,643
Animistic	5,129,303	5,126,316	2,987	74
Minor and Unspecified	29,263	26,355	2,908	1,533
Total Females	152,996,919	151,396,156	1,600,763	152,026
Total Population	313,415,389	294,875,811	18,539,578	1,670,387

but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken owing to drought in Baluchistan, a considerable number of Nomad Brahuis from Chagai, and of Baloch from Mekran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian Frontier may be taken to be about a fifth of a million.

Emigration to Distant Countries.—Of the emigrants to distant countries a certain number find their way to French or Dutch Colonies, such as Surinam, Martinique and Guadeloupe. But the majority go to other parts of the British Empire. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Mahomedans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000 or 85 per cent. were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

Ceylon.—The movement to Ceylon is of long-standing. Owing to the rapid expansion of tea cultivation, the number of natives of India enumerated in that Island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent. chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000 and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the Island for many centuries and barely 100,000 are the offspring of recent settlers.

Malaya.—The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned to India as their birthplace. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

South Africa.—In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonisation has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three quarters of a century ago: and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or about 70 per cent. of the whole population. A large part of the island is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

RELIGIONS.

India is a land of many religions. All the great religious faiths of mankind are represented in its population by communities, whose origin carries us back to the early history of their respective creeds Hinduism and its offshoots, Buddhism and Jainism, are autochthonous. The Jews of Cochin have traditions which carry back their arrival on the coast to the time of their escape from servitude under Cyrus in the sixth century B. C. The Syrian Christians of Malabar ascribe the introduction of Christianity and the establishment of their original Church to the Apostle St. Thomas, in the year 52 A.D. Nearly two centuries before the followers of Mahomed obtained a footing in India as conquerors, a peaceful trading colony of Arabs had settled on the Malabar coast. The Parsi settlement in Gujarat dates from about the same period. These facts are recalled here because not only Europeans, but even educated Indians, speak as if the first foreign settlement in India was that which followed the Mahomedan conquest, and that Christianity was first brought to the country by the Portuguese. They also dispose of another erroneous idea that up to the time of the Mahomedan conquest, Hinduism absorbed all the foreign elements which found their way into the country. No doubt Greeks, Bactrians and Scythians were so absorbed into the structure of Hinduism, but the fact that the Jews, the Syrian Christians and the Parsis have remained distinct from Hinduism, shows that this was not the case universally. If we may hazard a conjecture, it would seem that the ancient Hindu policy towards immigrants who came by land differed from that observed in the case of immigrants by sea. The Indo-Aryan himself entered the country through the mountain passes in the North-West, and knew something of the land which lay beyond. But the sea was always something of a mystery and a terror to him, and those

OCCUPATIONS OF THE INDIAN PEOPLES.

INDIA	313,470,014
A.— PRODUCTION OF RAW MATERIALS	227,030,092
I — Exploitation of the Surface of the Earth	226,550,483
Pasture and agriculture	224,695,900
(*a*) Ordinary cultivation	216,787,137
(*b*) Growing of special products and market gardening	2,012,503
(*c*) Forestry	672,093
(*d*) Raising of farm stock	5,176,104
(*e*) Raising of small animals	48,063
Fishing and hunting	1,854,583
II —Extraction of Minerals	529,609
Mines	375,927
Quarries of hard rocks	75,424
Salt, etc.	78,258
B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES	58,101,121
III.— Industry	35,323,041
Textiles	8,306,501
Hides, skins and hard materials from the animal kingdom	698,741
Wood	3,799,892
Metals	1,861,445
Ceramics	2,240,210
Chemical products properly so called, and analogous	1,241,587
Food industries	3,711,675
Industries of dress and the toilet	7,750,609
Furniture industries	39,268
Building industries	2,062,493
Construction of means of transport	66,056
Production and transmission of physical forces (heat, light, electricity, motive power, etc.).	14,384
Industries of luxury and those pertaining to literature and to arts and sciences.	2,141,665
Industries concerned with refuse matter	1,388,515
IV.—Transport	5,028,900
Transport by water	982,766
Transport by road	2,781,938
Transport by rail	1,062,493
Post Office, telegraph and telephone services	201,781
V.—Trade	17,839,102
Banks, establishments of credit, exchange and insurance	1,220,187
Brokerage, commission and export	240,858
Trade in textiles	1,277,469
Trade in skins, leather and furs	296,712
Trade in wood	224,838
Trade in metals	59,766
Trade in pottery	101,981
Trade in chemical products	171,927
Hotels, cafes, restaurants, etc.	719,052
Other trade in food stuffs	9,478,868
Trade in clothing and toilet articles	306,701
Trade in furniture	173,418

who came from beyond the sea were looked upon as beings of a different clay. They were treated hospitably, and in course of time they assimilated much of the influences of their Hindu environment. But they remained all the same separate communities, and no attempt was made to incorporate them in the great mass of Hinduism. The prohibition of sea voyage to members of the higher castes is another proof of the peculiar prejudice which ancient Indians cherished against inhabitants of countries divided from India by intervening seas.

Origin of Hinduism.—We have spoken alone of Hinduism as being autochthonous. The opinion generally held is that the ancestors of the Vedic Indians were immigrants from Central Asia. An Indian scholar of some repute has recently endeavoured to show that the received opinion is not borne out by the evidence available in the ancient literatures of India. Whatever may be the value attaching to his contention that the Vedic Indians were not immigrants or descendants of immigrants, but only a section of the indigenous population addicted to the cult of fire-worship, it is true, as he says, that there is no expression in the Vedas of a longing, lingering remembrance of a foreign homeland, such as one might expect to find in the literature of an immigrant race. This is all the more remarkable as an intense attachment to the land they lived in is manifest in all their compositions. A Sanskrit couplet in which the names of the seven great rivers of India, the Ganges, the Jumna, the Godavari, the Saraswati, the Nerbudda, the Indus and the Cauvery, are strung together in pious praise, is recited daily by millions of Hindus at their daily devotions, and helps to keep them in mind of the sanctity of the Indian Continent in Hindu eyes. If the ancient Hindus were immigrants, they not only took exceptional care to blot out all memories of the land from which they came from their own minds, but they also strove by every means in their power to bind the reverence and love of their posterity to India as the land *par excellence* of religion and morality, so much so that the name Hindu, in the orthodox acceptance of the term, is not applicable to anyone who is not born in India. If the ancestors of the Hindus were foreigners in India, they must have set themselves, as a matter of deliberate policy, to intertwine the deepest affections and the highest aspirations of their race with the land in which they had settled, to the entire exclusion of the land whence they had come.

Evolution of Hinduism.—Following from the theory that the ancestors of the Hindus were immigrants from Central Asia, is the explanation generally given of the varieties of religious beliefs and social practices to be found within the pale of Hinduism. Hinduism, it is the common idea, was originally a pure and simple creed which has had to compromise with the Animism of the population, amongst whom it spread, by accepting several of its godlings and superstitions. The greatest obstacle in the way of this explanation is that there is no evidence whatsoever of any organised missionary activity among the Hindus at any time. The immense distances and the absence of means of communication, would of themselves have made such activity difficult. Moreover, a compromise implies selection and rejection and the existence of some agency entrusted with the duty of selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it covers practically all the beliefs and customs which prevail amongst the tribes who are included within its pale. Such a state of things is more consonant with the view that the purer forms of Hinduism are highly evolved stages of the cruder forms which are still observed by the less educated and prosperous sections of the community. This view, namely, that the higher forms of Hinduism are evolved from lower ones, rather than that the latter are corruptions of the former, gains support from what is now generally accepted as being the true explanation of the origin of certain social customs. Twenty years ago, it was generally held that the custom of child marriages, for instance, was of sacerdotal origin and was most largely prevalent amongst the higher castes from whom it spread to the lower. Recently, however, it has been proved that child marriages are prevalent far more largely and in a far grosser form amongst the lowest castes than amongst the higher castes, and that amongst the latter, it is a survival from the times when the caste system was less rigid and intermarriages, that is to say, the taking of wives by the higher castes from the lower, were common. It may be added that the two most characteristic beliefs of Hinduism, namely, that in the transmigration of souls and in the law of *Karma* or retribution, are held with, if anything, more tenacity by the lower than by the higher castes.

Scope of Hinduism.—From this point of view, the varying beliefs and customs which go under the name of Hinduism not only offer no difficulties, but furnish the right clue to the understanding of this unique socio-religious system. They explain why the term "religion" as applied to Hinduism does not adequately express its scope and method. Hinduism has no settled creeds which are obligatory on every Hindu. It enforces no fixed and uniform moral standards on the innumerable sects and castes which bear its name. It extends its suffrages to monogamous, polygamous and even polyandrous unions between the sexes and, in the case of the so-called *devadasis*, countenances a life of open irregularity. An Indian newspaper recently instituted an interesting discussion on the question "Who is a Hindu." An eminent Hindu lawyer, who subsequently rose to be a judge of one of the Indian High Courts, laid down that a Hindu was one to whom the Indian Courts would apply the Hindu law. The learned lawyer, however, forgot that there are Mahomedan castes which follow the Hindu law in regard to the inheritance of and succession to property.

And yet, though Hinduism refuses to conform to almost every one of the ideas which we usually associate with the term "religion," it is impossible to deny that it occupies a unique and highly important place amongst the religious systems of the world. The reason why it does not fit into our definition of religion is that it represents a fundamentally different line of evolution in the history of religious

OCCUPATIONS OF THE INDIAN PEOPLES—*contd.*

V.—Trade—contd.	
Trade in building materials	84,613
Trade in means of transport	239,396
Trade in fuel	524,962
Trade in articles of luxury and those pertaining to letters and the arts and sciences.	522,120
Trade in refuse matter	3,695
Trade of other sorts	2,192,534
C.—PUBLIC ADMINISTRATIONS AND LIBERAL ARTS	10,912,123
VI.—Public Force	2,398,586
Army	665,278
Navy	4,640
Police	1,728,668
VII.—Public Administration	2,648,005
VIII.—Professions and Liberal Arts	5,325,357
Religion	2,769,489
Law	303,408
Medicine	626,900
Instruction	674,393
Letters and arts and sciences	951,167
IX.—Persons living principally on their Income	540,175
D.—MISCELLANEOUS	17,286,678
X.—Domestic Service	4,599,080
XI.—Insufficiently described Occupations	9,236,210
XII.—Unproductive	3,451,381
Inmates of jails, asylums and hospitals	132,610
Beggars, vagrants and prostitutes	3,318,771

DISTRIBUTION OF THE POPULATION.

1	India. 2	British Provinces. 3	Native States. 4
Area in square miles	1,802,657	1,093,074	709,583
Number of Towns and Villages	722,495	538,809	183,686
(*a*) Towns	2,153	1,452	701
(*b*) Villages	720,342	537,357	182,985
Number of Occupied Houses	63,710,179	49,140,947	14,569,232
(*a*) In Towns	6,037,456	4,409,121	1,628,335
(*b*) In Villages	57,672,723	44,731,826	12 940,897
Total Population	315,156,396	244,267,542	70,888,854
(*a*) In Towns	29,748,228	22,817,715	6,930,513
(*b*) In Villages	285,408,168	221,449,827	63,958,841
Males	161,338,935	124,873,691	36,465,244
(*a*) In Towns	16,108,304	12,525,830	3,582,474
(*b*) In Villages	145,230,631	112,347,861	32,882,770
Females	153,817,461	119,393,851	34,423,610
(*a*) In Towns	13,639,924	10,291,885	3,348,039
(*b*) In Villages	140,177,537	109,101,966	31,075,571

thought. In other races the line of evolution was from polytheism to monotheism, but in India it was from polytheism to the higher pantheism. Contrasting the development of the Judaic idea of God with that of the Hindus, Dr. Harold Haffding observes "With the Hindus there was no God who claimed sole sway; they went back to the power which makes all gods what they are, to the inner aspirations and needs which find vent for themselves in prayer and sacrifice. Following an extremely remarkable line of thought that which drives men to worship gods was itself regarded as the true divine power. Brahma meant originally the magical, creative word of prayer, but it afterwards came to denote the principle of existence itself, so that we have a transition from the idea of motion towards to that of its goal, from prayer to the object addressed in prayer." The Indian philosopher saw the whole universe transfused and overspread with Deity. He perceived how evil was being perpetually transformed to good in the cosmic process spreading out before the poet and the philosopher, endless and timeless, to whom the evil and the good seemed but different stages in a great common process of which the secret was known only to the Supreme Being. No European writer has caught the innermost essence of the Hindu philosopher's idea of the Supreme, so faithfully, and expressed it so felicitously as Sir Edwin Arnold in his "Light of Asia."

> Before beginning, and without an end,
> As space eternal and as surety sure,
> Is fixed a Power divine which moves to good,
> Only its laws endure.
> It is not marred nor stayed in any use,
> All liketh it; the sweet white milk it brings
> To mothers' breasts, it brings the white drops too,
> Wherewith the young snake stings.
> It slayeth and it saveth, nowise moved
> Except unto the working out of doom;
> Its threads are Love and Life; Death and Pain
> The shuttles of its loom.
> It maketh and unmaketh, mending all;
> What it hath wrought is better than had been;
> Slow grows the splendid pattern that it plans
> Its wistful hands between.

The ethical values of Hinduism are not different from those of other great religions. Like them it attaches little importance to the qualities which make for wordly success, and most importance to self-sacrifice, humility and kindliness to all. Only its methods differ. On the whole, however, the Hindu socio-religious scheme, owing to its tendency to make the individual human being a passive instrument in the hands of a Higher Power instead of an active co-operator with it, has favoured stability at the expense of progress.

Hindu sects.—Hinduism is made up of many sects and cults. It is usual to speak of Hinduism as it was before Buddhism, as a single creed, but this is because the literature that has come down to us is the literature of the sect that came to supersede all others. But even in it, we can, by reading between the lines, discover the existence of rival sects. Even the Vedas themselves are the literature probably of one of several sects which happened to be gifted with a talent for letters. The rapid multiplication of sects, however, was undoubtedly encouraged by the introduction of idol worship in imitation of the practice of decadent Buddhism. Hindu religious philosophers recognised three ways of salvation, namely, the way of knowledge, the way of faith and the way of service. Every sect of Hinduism recognises the value of all these three ways, but it differs as to the relative importance to be attached to each. The sect of the great philosopher, Sankaracharya, who maintained that the Supreme Being was the only Reality and that all the phenomenal universe was Maya or illusion, and that salvation came from the realisation of this fact, did not discard faith and service altogether, but only gave these a subordinate position in his scheme of religion. Ramanuja, Madhva and Vallabhacharya who followed him and, in more or less degree, refuted his doctrine of the non-reality of the phenomenal universe, laid more stress on faith and service than on knowledge, but they did not discard the path of knowledge altogether. It should be mentioned here that it has been the great misfortune of Hinduism that the path of service has come to mean the path not of altruistic service to mankind but the path of service conceived in a ceremonial sense to priests, religious recluses and mendicants and to idols. It is the great aim of the modern religious reform movements such as the Arya Samaj and the Brahma Samaj to rescue the path of service from this spurious interpretation and to make altruistic social service an integral part of religion. The question of sect, however, does not play a very important part in Hinduism. Except in Southern and to a much smaller extent, in Western India, the great mass of the Hindus are not sectaries. In Southern India, the Vaishnavas and Madhvas will, on no account, worship Shiva or visit a temple dedicated to him. The Lingayaths are a Shiva sect found in the Karnatak districts of the Bombay and Madras Presidencies, and in Mysore, and they have an invincible repugnance to the worship of Vishnu. But these are exceptional instances. But so far as the bulk of the Hindus are concerned, they resort to the nearest shrine whether it be dedicated to Shiva or Vishnu. The attitude of Hinduism to other religions is that they are each of them the most suitable path to salvation for the people who are born in them—that they are all several roads which lead to Heaven. For this reason Hinduism has never been a proselytising religion. This has proved a disadvantage to it face to face with such religions as Mahomedanism and Christianity which not only admit converts, but are actively engaged in seeking them. The proportion of Hindus to the total population has steadily diminished during the last forty years, partly owing to conversions to other religions particularly from amongst the lower classes. Conversions from among members of the higher and literate classes have practically ceased.

Hinduism.—The Hindus number 217,586,892 or 69·4 per cent. of the total population of

India. Buddhists and Jains together number 11,969,635. Thus 229,556,527 or about 73 per cent. of the Indian people depend for their spiritual sustenance on Hinduism and its offshoots.

The Buddhist population is mostly Burmese, Buddhism having ceased a thousand years ago to count as a leading religion in the land of its birth. Several reasons are usually given to account for the hostility of Hinduism to Buddhism, such as that Buddha denied the authority of the Vedas and the existence of God and of the human soul. Jainism did all this, and yet Jains to-day occupy a recognised position in the Hindu social system. The real reason for the Hindu hostility to Buddhism was that it influenced and was in its turn influenced by in the later years of its prevalence in India, the alien Mongolian consciousness. Hinduism has always been extremely tolerant of indigenous heresies, but it is jealous of outside influence. Indian Buddhism, too, had become extremely corrupt and superstitious long before Hinduism re-established itself as the religion pre-eminently of the Indian people.

Other Indigenous Religions.—Buddhism and Jainism were originally only sects of Hinduism. Jainism even now is not so sharply divided from the latter religion as Buddhism is. Jains are everywhere a recognised section of Hindu Society, and in some parts of the country there has been an increasing tendency on their part to return themselves at the Census as Hindus. The outstanding feature of Jainism is the extreme sanctity in which all forms of life are held. The Jains are generally bankers and traders. Their number at the last Census was 1,248,182, the apparent decline being due to the tendency noted above for Jains to return themselves as Hindus. Buddhism is professed but by few persons in India. The Buddhist population of the Indian Empire is mainly Burmese. Their number is 10,721,453. The founders of Buddhism and Jainism are believed to have been contemporaries, whose date is assigned somewhere in the 5th Century B.C. Sikhism, which is the next important indigenous religion, had its origin many centuries later. The founder of Sikhism, Guru Nanak, flourished in the latter half of the 15th Century of the Christian era. Nanak's teaching amounted to nothing more than pure Theism. He taught that there is only one true God, he condemned idolatry, proclaimed the futility of pilgrimages and rites and ceremonies, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. He preached the brotherhood of men. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century, when the persecutions of Aurangzeb had the effect of converting it into a militant creed. This momentous change was accomplished under the direction of Guru Govind, the tenth and last of the Gurus: "I shall send a sparrow," he once exclaimed and "lo! the imperial falcons will fly before it." On his death-bed, he exhorted his followers to regard the Granth, the sacred book of the Sikhs, as their Guru, to look upon it as the person of the living Guru. After his death, Sikhism passed through a period of deepest gloom, but it soon recovered and in 1758 the Sikhs entered Lahore in triumph. The teachings of Guru Nanak have profoundly affected Hindu thought and life in the Punjab, though the number of persons professing the Sikh religion is only 3,014,466 according to the 1911 Census. This represents an increase of over 40 per cent. since 1901. Two other religious movements, offshoots of Hinduism, remain to be mentioned, namely, the Brahmo-Samaj and the Arya-Samaj. Both of them are less than one hundred years old. The founder of the former was Raja Ram Mohan Roy, and of the latter, Swami Dayanand Saraswati. The Brahmo-Samaj does not believe in an infallible scripture, while the Arya-Samaj accepts the Vedas as Divinely revealed. Both the movements are opposed to idolatry and favour social reform. The Brahmo movement, appealing as it does to the cultured intellect, has not been making as much progress as the Arya-Samaj. The number of persons professing each of these creeds is 5,504 and 243,445 respectively. The stronghold of the Arya-Samaj is the Punjab, that of the Brahmo-Samaj, Bengal.

Non-Indian Religions.

Mahomedanism.—Of non-Indian religions, that is, of religions which had their origin outside India the religion which has the largest number of followers in this country is Mahomedanism. One hundred years before the Mussulmans obtained a foothold in Sind by right of conquest, they were settled in Cochin as traders and missionaries. The author of Cochin Tribes and Castes refers to a tradition that in the 7th Century, a Mahomedan merchant named Malak Medina, accompanied by some priests, had settled in or near Mangalore. The Kollam era of Malabar dates, according to popular tradition, from the departure of Cheruman Perumal, the last of the Perumal Kings, to Arabia, on his conversion to Islam. The date of the commencement of the era is the 25th August 825 A.D. For about twelve Centuries, Islam has existed in India side by side with Hinduism. During that period it has been greatly influenced by Hindu ideas and institutions. Moreover, the Indian converts to Mahomedanism have to a large extent retained the customs and beliefs of Hinduism. The writer of the article on religions of India in the new edition of the *Imperial Gazetteer* observes of Islam in India: "If it has gained some converts from Hinduism it has borrowed from it many of those practices which distinguish it from the original faith of Arabia. By degrees the fervid enthusiasm of the early raiders was softened down; the two religions learned to live side by side; and it the Mahomedan of the later days could never conceal his contempt for the faith of his 'pagan' neighbours, he came to understand that it could not be destroyed by persecution. From the Hindus Islam derived much of its demonology, the belief in witchcraft, and the veneration of departed Pirs or Saints. The village Musulman of the present day employs the Hindu astrologer to fix a lucky day for a marriage, or will pray to the village god to grant a son to his wife. This is the more natural, because conversion to Islam, whenever it does occur, is largely from the lower castes." Mahomedanism has

two main and several minor sects. The major sects are the Shiah and the Sunni. The great majority of Indian Mussulmans are of the latter sect. The Punjab and Sind in the North-West and East Bengal in the North-East are the strongholds of Islam in India. The Mussulman population of India, according to the Census of 1911, is 66,647,299. Of this number no less than 24 millions are in Bengal, about 12 millions in the Punjab, and about 5 millions in the United Provinces. Amongst Native States, Kashmere has the largest Mussulman population, about 2½ millions.

Christianity.—Indian Christianity has an even longer history than Indian Mahomedanism. According to the tradition prevailing among the Syrian Christians in Malabar, the introduction of Christianity and the establishment of the Original Church in Malabar in the year 52 A.D. are ascribed to the Apostle St. Thomas, who landed at Cranganore or Musiris, converted many Brahmins and others, ordained two Presbyters, and also founded seven churches, six in Travancore and Cochin, and the seventh in South Malabar (Cochin Castes and Tribes, Vol. II, Chapter XVI, p. 435). The history of Roman Catholicism in India dates from the beginning of the sixteenth Century. The first Protestant mission was established two centuries later by the Lutherans who started their work in Tranquebar in South India under Danish protection. The Christian population, according to the last Census, numbers 3,876,203. Nearly 2½ millions are inhabitants of the Madras Presidency and the Native States connected with it. Bihar and Bombay have each over 200,000 Christians.

Zoroastrianism.—This religion was brought or brought back to India in 717 A.D. by Parsis who, fleeing from persecution at the hands of the Mussulman conquerors of their native land, arrived at the little port of Sanjan, sixty miles north of Bombay in that year. According to the Indian antiquarian scholar, the late Rajendralal Mitra, the ancestors of the Hindus and Parsis dwelt together in the Punjab, when a religious schism led to the latter retracing their steps to Persia. This theory derives probability from the names of the beneficent and malefic deities referred to in the Hindu and Parsi sacred books: "What is most striking in the relations of the two faiths, is," writes Mr. Crooke in his article on the Religions of India in the *Imperial Gazetteer*: "that in the Avesta the evil spirits are known as Daeva (modern Persian Div), a term which the Indo-Aryans applied, in the form Deva, to the spirits of light. By a similar inversion, Asura, the name of the gods in the Rig Veda, suffered degradation and at a latter date was applied to evil spirits; but in Iran, Ahura was consistently applied in the higher sense to the deity, especially as Ahura Mazda, the wise, to the Supreme God." The Parsis have two sects. The principal difference between them appears to be that the holy days of the one precede those of the other by about a month. The number of Parsis, according to the last Census, is 100,096. The majority of the Parsis live in Bombay.

Jews.—The Beni-Israel at Kolaba, in Bombay, and the Jews at Cochin are descendants of ancient Colonies. The Kolaba Colony dates back to the sixth century, and the Cochin colony to the second century A.D. Both Jewish colonies recognize a white and black section, the latter being those who have more completely coalesced with the native population. The Jews numbered 20,080 at the Census of 1911.

Animists.—Since the Census of 1891, an attempt has been made to enumerate the "Animists" separately from the Hindus. 10,295,168 persons are classed as Animists, according to the last Census. The difference between Animism and Anthropomorphism has been stated by Professor Westermark, to be that, while the animist worships inanimate objects as gods, Anthropomorphism consists in the worship of such objects as representatives and reflection of the Deity. As a subtle distinction of this kind is not within the grasp of the average enumerator, the category of Animists in the Census Schedules is largely conjectural. Mr. Crooke in the *Imperial Gazetteer* observes "Such a classification is of no practical value, simply because it ignores the fact that the fundamental religion of the majority of the people—Hindu, Buddhist, or even Mussulman is mainly Animistic. The peasant may nominally worship the greater gods; but where trouble comes in the shape of disease, drought, or famine, it is from the older gods that he seeks relief."

SOCIAL INSTITUTIONS.

Uniformity of Indian Social Life.—Though India is a land of many religions and though each religious community has, as a rule, lived apart from the other communities for centuries, still there is a considerable uniformity in the arrangements and institutions of their social life. The social system of the Hindus is the type to which all other communities domiciled in the country have hitherto tended to conform. To a large extent, this uniformity of social arrangements is clearly due to the fact that, amongst the Mahomedans and Indian Christians, for instance, the converts from Hinduism continued to retain their old ideas in regard to social conduct. To a smaller extent, the motive which influenced them to conform to Hindu social ideal has been the convenience thereby caused in business intercourse with their Hindu neighbours. Thus, we find, there is scarcely any community in India which has not been more or less infected by the caste spirit. The Jews, the Parsis, the Christians, and even the Mahomedans have been influenced by it. Other Hindu social institutions and customs which have exerted a similar influence are the joint family system, the custom of child marriages, and of enforced widowhood, and the feeling that contact with persons engaged in certain occupations is polluting. In view of this general similarity of the social institutions of the several Indian communities, a description of the Hindu social system which is the great prototype of them all, will give a general idea of the social life of the Indian population as a whole. It should, however, be mentioned here that, in recent years, as the result of a growing communal consciousness, efforts have been

made by many of the Indian communities to discard whatever is in disaccord with the original simplicity of their respective faiths. But this movement has as yet touched no more than the highly educated fringe, and even among the latter, there are thoughtful men who distrust "revivals" as substitutes for reform.

Caste.—The most conspicuous social institution of India is caste. Caste is based on birth. The effect of caste is to divide society into a number of vertical sections, and not as in modern countries, into horizontal sections. The economic and cultural differences among the members of each caste are great. The millionaire and the pauper, the scholar and the illiterate of one caste, form a social unit. The rich man of one caste must seek a husband for his daughter among the poor of his caste, if he cannot find one of a corresponding position in life. He can on no account think of marrying her to a young man of another caste, though as regards culture and social position, he may be a most desirable match. Thus, each caste is, within itself, a democracy in which the poor and the lowly have always the upper hand over the rich and the high-placed. In this way, the system of caste has, in the past, served as a substitute for State relief of the poor by means of special laws and institutions. To some extent, this is the case even now, but the economic pressure of these days, and the influence of Western education, are profoundly modifying the conception of caste. The growth of the English-educated class on the one hand, and of the modern industrial and commercial class of Indians on the other, with common aspirations and interests, is a factor calculated to undermine the importance of caste. Although for purely social purposes, it will, no doubt, linger for many years longer, it is bound ultimately to collapse before the intellectual and economic influences which are moulding modern India. The question how caste originated has been discussed by several learned Orientalists, but the latest and most authoritative opinion is that its rise and growth were due to several causes, the principal of them being differences of race and occupation. The four original castes of the Hindus have multiplied to nearly two thousand, owing to the fissiparous tendencies of Hindu social life. Some large castes consist of many thousands of families, while others, notably in Gujarat, comprise scarcely a hundred houses. Among Indian Mahomedans, there are several communities which are virtually castes, though they are not so rigidly closed as Hindu castes. Indian Christian converts, in some parts of the country, insist on maintaining the distinctions of their original castes, and in a recent case, one caste of Indian Christians contested, in a Court of Law, a ruling of their Bishop disallowing the exclusive use of a part of their church to members of that caste. The Parsis are practically a caste in themselves. The observations regarding caste apply more or less to the institution of the joint family of which really the former is an extension. This institution is rapidly breaking-up, though the rigidity of the Hindu law of succession operates wholly in its favour.

The Social Reform Movement.—The social reform movement among the Hindus to which reference is made in the foregoing paragraph, had its origin in efforts made by the Government of India, with the co-operation and support of enlightened Hindus, in the early part of the last century to put down the practice of *sati*, that is, burning the widow along with her dead husband. This cruel practice, which prevailed particularly among the high caste Hindus in Bengal, was eventually suppressed by legislation. But the discussions which ensued in connection with *sati* question led to the exposure of the hard lot of Hindu widows as a class. Remarriage was prohibited and as child marriages were common, several young girls were condemned to lead a life of celibacy on the death of their husbands. This led to immorality, and infanticide by young widows, who were anxious to hide their shame, was not infrequent. Led by the Pandit Ishwar Chandra Vidyasagara, a very learned Sanskrit scholar, a movement began which had for its object the removal of the ban on the remarriage of Hindu widows. The Pandit was able to prove from the Hindu religious books that the remarriage of widows had the sanction of antiquity. But it was necessary in order to establish the validity of the remarriage of Hindu widows beyond doubt, to have a law passed by the Legislative Council of the Governor-General of India. The Pandit and his followers memorialised Government. There was strong opposition from the orthodox masses, but the Government of the day were convinced that justice was on the side of the reformers, and the Hindu Widow Remarriage Act was passed. The controversy on the question of the remarriage of widows led to other consequences. It was felt that the age at which girls were married was absurdly low, and that child marriages were at the root of many social evils. It was also realised that the general illiteracy of Indian women was the greatest obstacle in the way of reforming social customs, and that education of women should be the first plank in the social reform platform. The earliest social reformers in India were the Brahmo Samajists who discarded idolatry and caste. Other reformers since then have endeavoured to propagate ideas of social reform entirely on a secular basis. The Indian National Social Conference is their principal organisation, and it is supported by Provincial and District Conferences and Associations. Social reform ideas have made considerable headway during the last twenty-five years. Widow marriages are of weekly occurrence in some provinces. The restrictions of caste as to inter-dining and sea-voyage have lost much of their force. The age at which girls are married is steadily, if slowly, rising. The education of girls is making rapid progress. An increasing number of them go to high Schools and Colleges every year. But the most significant testimony to the spread of social reform ideas in the country is the remarkable diminution in the volume and weight of the opposition to them. The number of journals devoted to the social reform cause is increasing, and some of the newspapers which had made themselves conspicuous by their virulent opposition to social reform twenty years ago, now recognise its utility and importance.

SEX.

In India as a whole the proportion of females per thousand males rose steadily from 954 in 1881 to 963 in 1901. It has now fallen again to exactly the same figure as in 1881. The important aspect of these figures is the great contrast they show between India and Europe, where the number of females per thousand males varies from 1,093 in Portugal, and 1,068 in England and Wales, to 1,013 in Belgium, and 1,003 in Ireland. In drawing attention to this disparity the Chief Census Officer argued that the relatively high mortality amongst females was sufficient to account for the difference stated. Then in summarising the causes of this relatively higher mortality he said: "In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls, by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India, the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it varies greatly in intensity. It is strongest amongst communities such as the higher Rajput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive and those like the Pathans who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly, female infants were frequently killed as soon as they were born and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralised by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unskilful midwifery, and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men, and they are thus less favourably situated in respect of their occupations than their sisters in Europe." It is but fair to say that this conclusion has been challenged by many Indian writers, who attribute far greater importance than the Chief Census Officer to the omission of females at the enumeration.

MARRIAGE.

Although recognised in some backward parts, polyandry is now rare in India. With orthodox Hindus marriage is a religious sacrament which cannot be revoked. The Mahomedans allow a man to divorce his wife without any special reason, but he then becomes liable to pay her dower. The permission is seldom acted upon. The Buddhists of Burma regard marriage merely as a civil contract, and either side can annul it. The Hindu law places no restriction on the number of wives a man may have; but most castes object to their members having more than one wife, except for special reasons. A Mahomedan may have four wives, but he also in practice is generally monogamous.

Marriage Statistics.—In the population of ages and religions, about half the males and one-third of the females are unmarried; 46 per cent. of the males and 48 of the females are married, and 5 and 17 per cent. respectively are widowed. A reference to the age statistics shows that the great majority of the unmarried of both sexes are very young children, three-quarters of the bachelors being under 15 years of age, while a somewhat larger proportion of the spinsters are under 10; only one bachelor in 24 is over 30, and only one spinster in 14 is over 15. At the higher ages practically no one is left unmarried, except persons suffering from some infirmity or disfigurement, beggars, prostitutes, concubines, religious devotees and mendicants and a few members of certain hypergamous groups who have been unable to effect alliances of the kind which alone are permitted to them by the rules of their community. It is the persons of the above classes who contribute the 1 per cent. of the males over 40, and the 1 per cent. of the females over 30 who are not, and never have been, married.

Marriage Universal.—This universality of marriage constitutes one of the most striking differences between the social practices of India and those of Western Europe. It has often been explained on the ground that, with the Hindus, marriage is a religious necessity. Every man must marry in order to beget a son who will perform his funeral rites and rescue his soul from hell. In the case of a girl it is incumbent on the parents to give her in marriage before she reaches the age of puberty. Failure to do so is punished with social ostracism in this world and hell fire in the next. But it is not only with the Hindus that marriage is practically universal; it is almost equally so with the Mahomedans, Animists and Buddhists.

Early Marriage.—Another striking feature of the Indian statistics as compared with those of Western Europe is the early age at which marriage takes place. According to M. Sundbarg's table showing the average distribution by age and civil condition of the people of Western Europe according to the censuses taken about the year 1880, of the population below the age of 20, only one male in 2,147 is married and one female in 142. In India, on the other hand, 10 per cent. of the male, and 27 per cent. of the female, population below that age are married. The number of males below the age of 5 who are married is small, but of those aged 5 to 10, 4 per cent. are married, and of those aged 10 to

15, 13 per cent. At '15-20' the proportion rises to 32, and '20-30' to 69 per cent. Of the females under 5, one in 72 is married, of those between 5 and 10, one in ten, between 10 and 15, more than two in five, and between 15 and 20, four in five. In the whole of India there are 2½ million wives under 10, and 9 million under 15 years of age. The Hindu law books inculcate marriage at a very early age, while many of the aboriginal tribes do not give their girls in wedlock until after they have attained puberty.

Widowhood.—It is only when we come to a consideration of the widowed that we find a state of things peculiarly Indian and one that seems to be derived from the prescriptions of the Hindu law-givers. The proportion of widowers (5 per cent. of the total male population) does not differ greatly from that in other countries, but that of the widows is extraordinarily large, being no less than 17 per cent. of the total number of females, against only 9 per cent. in Western Europe. When we consider their distribution by age, the difference becomes more still striking, for while in western Europe only 7 per cent of the widows are less than 40 years old, in India 28 per cent are below this age, and 1·3 per cent. (the actual number exceeds a third of a million) are under 15, an age at which in Europe no one is even married

The large number of widows in India is due partly to the early age at which girls are given in marriage, and partly to the disparity which often exists between the ages of husband and wife, but most of all to the prejudice against the re-marriage of widows. Many castes, especially the higher ones, forbid it altogether, and even where it is not absolutely prohibited, it is often unpopular. Although widow marriage is permitted by their religion, and the Prophet himself married a widow, the Mahomedans of India share the prejudice to some extent. How the re-marriage of widows first came to be objected to, it is impossible to say, but it seems highly probable that the interdiction originated amongst the Aryan Hindus, that it was confined at first to the higher castes, and that it has spread from them downwards.

Infant Marriage.—It is difficult to draw from the statistics any definite conclusion as to whether infant marriage is becoming more or less common, but so far as they go, they point to a slight diminution of the practice. The figures for 1901 were abnormal owing to the famines of 1897 and 1900, and it is safer to take the year 1891 as the basis of comparison. There are now 18 Hindu girls per mille who are married at the age of '0-5' as compared with only 16 at that time, but at the age '5-10' the proportion has fallen from 146 to 132, and at '10-15' from 542 to 488. Amongst Mahomedans the proportion at the first mentioned age-period has fallen from 7 to 5, at the second from 83 to 65 and at the third from 474 to 393.

The practice has been denounced by many social reformers, since Mr. Malabari opened the campaign a quarter of a century ago; and the Social Conference which holds its meetings annually in connection with the National Congress has made the abolition of child marriage one of the leading planks in its platform. It is, as we have seen, strongly discouraged by the Brahmos in Bengal and the Aryas in Northern India. The more enlightened members of the higher castes who do not allow widows to re-marry are beginning to realise how wrong it is to expose their daughters to the risk of lifelong widowhood, and a feeling against infant marriage is thus springing up amongst them.

In two Native States action has been taken. In Mysore an Act has been passed forbidding the marriage of girls under eight altogether, and that of girls under fourteen, with men over fifty years of age. The object of the latter provision is to prevent those unequal marriages of elderly widowers with very young girls which are popularly believed to be so disastrous to the health of the latter, and which in any case must result in a large proportion of them leading a long life of enforced widowhood. The Gaekwar of Baroda, the pioneer of so much advanced legislation, has gone further. He passed for his State in 1904, in the face of a good deal of popular opposition, an "Infant Marriage Prevention Act", which forbids absolutely the marriage of all girls below the age of nine and allows that of girls below the age of twelve and of boys below the age of sixteen, only if the parents first obtain the consent of a tribunal consisting of the local Sub-Judge and three assessors of the petitioner's caste. Consent is not supposed to be given except on special grounds, which are specified in the Act.

Widow re-marriage.—The prohibition of widow marriage is a badge of respectability. Castes do not allow it rank higher on that account in social estimation. There is a strong tendency amongst the lower Hindu castes to prohibit, or at least, to discountenance, the marriage of widows. At the other end of the social structure there is a movement in the opposite direction. Many social reformers have inveighed against the condemnation of virgin widows to perpetual widowhood, and have pointed out that the custom is a modern innovation which was unknown in Vedic times. In many provinces recently there have been cases in which such widows have been given in marriage a second time, not only amongst Brahmos and Aryas, who naturally lead the way, but also amongst orthodox Hindus. A number of such marriages have taken place amongst the Bhatias of the Bombay Presidency. It is said that in the United Provinces considerably more than a hundred widows have been re-married in the last ten years. The actual results no doubt are small so far, but the first step has been taken and the most violent of the opposition has perhaps been overcome.

EDUCATION.

The general education policy of the Government of India, and its results, are discussed in a special article on Education (*q. v.*) But we may conveniently here indicate some of the education tendencies revealed in the census returns.

Of the total population of India, only 59 persons per mille are literate in the sense of being able to write a letter to a friend and to read his reply. The number who can decipher the pages of a printed book with more or less difficulty is no doubt much larger. Throughout India there are many Hindus who though unable to write can

drone out at least the more familiar parts of the Mahabharata or Ramayana to their neighbours, who feel that it is meritorious to listen to the recital of the sacred texts, even though they, and possibly the reader also, may not always fully understand the meaning. Similarly there are many Mahomedans, especially in Northern India, who can read the Koran, though they cannot write a word. Of this minor form of literacy the census takes no count. The number of persons who are literate in the sense in which the term was used at the present census is divided very unequally between the two sexes; of the total male population, 106 per mille are able to read and write, and of the female only 10. In other words there is only one literate female to every eleven males. If we leave out of account children under 15 years of age, the number of literate males per mille is 149, and that of literate females 13.

Education by Provinces.—Thanks to the free instruction imparted in the monasteries and the absence of the pardah system which hampers the education of females in other parts of India, Burma easily holds the first place in respect of literacy. In the whole population 222 persons per mille are literate and the proportion rises to 314 amongst persons over 15 years of age. In every thousand persons of each sex, 376 males and 61 females are able to read and write. Of the other main British provinces, Bengal and Madras come next with 77 and 75 literate persons per mille respectively. Bombay follows closely on their heels. Then after a long interval come Assam, Bihar and Orissa and the Punjab. At the bottom of the list are the United Provinces and the Central Provinces and Berar, with 34 and 33 literate persons per mille respectively. Differences similar to those noticed above sometimes have their counterpart within provincial boundaries. Thus in Bihar and Orissa, the Orissa natural division has 64 literate persons per mille and the Chota Nagpur plateau only 28. In the Central Provinces and Berar, the proportion ranges from only 6 per mille in the Chota Nagpur States to 54 in the Nerbudda Valley.

Native States.—Education is more widely diffused in British provinces than in the Native States, which, taken as a whole, have only 79 males and 8 females per mille who are literate, as compared with 113 and 11 in British territory. The three Native States of Cochin, Travancore and Baroda, however, take rank above all British provinces except Burma, while in respect of female education Cochin divides with Burma the honours of first place. The Kashmir State where only 21 persons per mille can read and write, is in this respect the most backward part of India.

By Religion.—Of the different religious communities excluding the Brahmos and Aryas whose numbers are insignificant, the Parsis easily bear the palm in respect of education. Of their total number 711 per mille are literate, and the proportion rises to 831, if persons under 15 years of age are left out of account Of the males nearly four-fifths are literate, and of the females nearly two-thirds. Amongst those over 15 years of age only 8 per cent. of the males and 28 per cent. of the females are unable to read and write. The Jains, who are mostly traders, come next, but they have only two literate persons to every five amongst the Parsis. Half the males are able to read and write, but only 4 per cent. of the females. It is noticeable, however, that whereas the proportion of literate males is only slightly greater than it was at the commencement of the decade, that of literate females has doubled. The Buddhists follow closely on the Jains, with one person in four able to read and write. Here also we see the phenomenon of a practically unchanged proportion of literate males (40 per cent.) coupled with a large increase in that of literate females, which is now 6 per cent. compared with 4 per cent. in 1901. The Christians (22 per cent. literate) are almost on a par with the Buddhists, but in their case the inequality between the position of the two sexes is much smaller, the proportion of literate females being nearly half that of males. In order to ascertain how far the high position of Christians is due to the inclusion of Europeans and Anglo-Indians, the figures for Indian Christians have been worked out separately. The result is somewhat surprising; for although the Indian converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and more than four times as many as the Mahomedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille amongst their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the school-going age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians.

The Sikhs come next in order of merit, with one literate person in every fifteen; for males the ratio is one in ten and for females one in seventy. Here again, while the proportion for males shows only a slight improvement, that for females has doubled during the decade. The Hindus have almost as large a proportion of literate males per mille (101) as the Sikhs, but fewer literate females (8). The Mahomedans with only 69 and 4 per mille respectively, stand at the bottom of the list, except for the Animistic tribes of whom only 11 males and 1 female in a thousand of each sex are able to read and write. The low position of the Mahomedans is due largely to the fact that they are found chiefly in the north-west of India, where all classes are backward in respect of education, and in Eastern Bengal where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar, they stand above or on an equality with the Hindus and the same is the case in Bombay excluding Sind. In Sind the Mahomedan population is exceptionally illiterate, but in the rest of the Presidency it consists largely of traders, and education is much more widely diffused amongst them than amongst Hindus. The figures for Hindus again are a general average for all castes, high and low. It will be seen further on that some of the higher Hindu castes

are better educated than the Buddhists while others are even less so than the Animists.

Increase of Literacy.—The total number of literate persons has risen during the decade from 15.7 to 18.6 millions or by 18 per cent. The number of literate males has increased by 15 and that of literate females by 61 per cent. The proportion who are literate per thousand males has risen from 98 to 106 and the corresponding proportion for females from 7 to 10. If persons under 15 years of age be excluded, the proportions are 138 and 149 for male and 8 and 13 for females. The great improvement in the proportion of literate females is most encouraging. It is true that too much stress should not be laid on this when the actual number is still so small, but, on the other hand, it must be remembered that the rate of increase was equally great in the previous decade, so that it has now been continuous for twenty years. The total number of females over 15 years of age who can read and write is now a million and a quarter compared with less than half a million twenty years ago.

Progress.—Before leaving these statistics of schools and scholars we may glance briefly at the progress which they show is being made. The total number of scholars in all kinds of educational institutions in 1891 was only 3.7 millions. In 1901 it had risen to 4.4, and in 1911 to 6.3 millions. 17.7 per cent. of the population of school-going age were at school in 1912 as compared with 14.8 per cent. in 1907. Between 1891 and 1911 the number of students in secondary schools and Arts Colleges has doubled, and the number in primary schools has increased by 67 per cent., the proportion ranging from 39 per cent in Bombay to 204 per cent. in the United Provinces. Excluding Madras, where a school final examination has recently taken the place of the Matriculation, or Entrance examination of the University, the number of persons passing that examination has risen from 4,079 in 1891 to 10,512 in 1911. Including Madras the number who passed the Intermediate examination in Arts or Science has risen during the same period from 2,055 to 5,141, and that of those who obtained a degree in Arts, Science, Medicine or Law from 1,437 to 5,373. The general conclusion appears to be that, while the general rate of progress is far greater than would appear from a comparison of the census returns of 1901 and 1911, it is most marked in respect of secondary education.

There was a continuous fall, both in the number and the proportion of persons afflicted from 1881 to 1901; and this has now been followed by a move in the other direction. Though the proportion is smaller the number of the insane and the deaf-mutes is now about the same as it was thirty years ago. The number of lepers and blind however is less by about a sixth than it then was.

Infirmities.

The total number of persons suffering from each infirmity at each of the last four censuses is shown in the following table:—

Infirmity.	Number afflicted			
	1911	1901	1891	1881
Insane	81,006 **26**	66,205 **23**	74,279 **27**	81,132 **35**
Deaf-mutes	199,891 **64**	153,168 **52**	196,861 **75**	197,215 **86**
Blind	443,653 **142**	354,104 **121**	458,868 **167**	526,748 **229**
Lepers	109,094 **35**	97,340 **33**	126,244 **46**	134,968 **57**
Total ..	833,644 **267**	670,817 **229**	856,252 **315**	937,063 **407**

NOTE.—The figures in heavier type represent the proportion per 100,000 of the population.

Insanity.—In respect of the prevalence of insanity, India compares very favourably with European countries. According to the latest returns, the proportion of persons thus afflicted in England and Wales is 364 per hundred thousand of the population, or fourteen times the proportion in India. This may be due partly to the fact that the English statistics include the weak-minded as well as those who are actively insane, and to the greater completeness of the return in a country where the majority of the mentally afflicted are confined in asylums; but the main reason no doubt is to be found in the comparatively tranquil life of the native of India. It is well known that insanity increases with the spread of civilisation, owing to the greater wear and tear of nerve tissues involved in the struggle for existence.

The total number of insane persons exceeds by 9 per cent. that returned in 1891, but their proportion per hundred thousand of the population has fallen from 27 to 26. The decline is fairly general, the chief exceptions being the United Provinces, the North-West Frontier Province and four Native States in the peninsular area. In the United Provinces the number of the insane per hundred thousand of the population has risen from 12 to 18. No satisfactory explanation of this large increase is forthcoming.

Deaf-Mutes.—By deaf-mutism is meant the congenital want of the sense of hearing which, in the absence of special schools, such as are only

just beginning to appear in India, necessarily prevents the sufferer from learning to talk. Clear instructions were given to the enumerators to enter only persons who were congenitally afflicted. Some few, perhaps, may have been included in the return who had lost the power of speech or hearing after birth, but the total number of such mistakes is now very small. In India as a whole 74 males and 53 females per hundred thousand are deaf and dumb from birth. These proportions are much the same as those obtaining in European countries.

Blindness.—In India as a whole fourteen persons in every ten thousand of the population are blind, as compared with from eight to nine in most European countries and in the United States of America. It is a matter of common observation that blindness is ordinarily far more common in tropical countries than in those with a temperate climate. It is, however, less common in India than in parts of Eastern Europe; in Russia, for instance, nineteen persons in every ten thousand are blind.

Lepers.—In India as a whole 51 males and 18 females per hundred thousand persons of each sex are lepers. Of the different provinces, Assam suffers most, then Burma, and then in order Bihar and Orissa, the Central Provinces and Berar, Madras, Bengal, Bombay, the United Provinces, the Punjab and the North-West Frontier Province. In the two last-mentioned provinces there are only 17 male and 8 female lepers per hundred thousand of each sex. The occurrence of leprosy is very local and its prevalence varies enormously within provincial boundaries.

The number of lepers has fallen since 1891 from 126 to 109 thousand, a drop of more than 13 per cent. When it is remembered that the number of persons suffering from the other three infirmities taken together has remained almost stationary, it may be concluded that the decrease in the reported number of lepers is genuine and indicates a real diminution in the prevalence of the disease. It is possible that this is partly the result of the improved material condition of the lower castes, amongst whom leprosy is most common, and of a higher standard of cleanliness. The greater efforts which have been made in recent years to house the lepers in asylums may also have helped to prevent the disease from spreading. The total number of asylums in India is now 73, and they contain some five thousand inmates, or about 4.7 per cent. of the total number of lepers. This may not seem much, but it has to be remembered that the movement is still in its infancy and that progress has been very rapid in recent years. Complete statistics for 1901 are not readily available, but it is known that in the two provinces of Bengal and Bihar and Orissa, the number of lepers in asylums was then only about half what it is now. The greater part of the credit for the provision of asylums for these unfortunate persons belongs to the Mission for Lepers in India and the East, which receives liberal help from Government. Its latest report shows that there are 3,537 lepers in the forty asylums maintained by the Society.

The belief is growing that leprosy is communicated from one human being to another by some insect, and two South African doctors have recently published papers implicating the bed bug (*acanthia lectularia*). If this theory be correct it is obvious that the segregation of lepers in asylums must reduce the number of foci of the disease, and to that extent prevent it from spreading. It is worthy of note that in many of the districts where the disease was most prevalent in 1891, there has since been a remarkable improvement. Chamba which in 1891 had 34 lepers in every ten thousand of its population, now has only 15; in Birbhum the corresponding proportion has fallen from 35 to 16, in Bankura from 36 to 23, in Simla 29 to 18, in Dehra Dun from 20 to 11, in Garhwal from 17 to 10, in Burdwan from 22 to 14 and in North Arakan from 28 to 20.

OCCUPATIONS.

Nowhere are the many points of difference in the local conditions of India, as compared with those of western countries, more marked than in respect of the functional distribution of the people. In England, according to the returns for 1901, of every hundred actual workers, 58 are engaged in industrial pursuits, 14 in domestic service, 13 in trade and only 8 in agriculture, whereas in India 71 per cent. are engaged in pasture and agriculture and only 29 per cent in all other occupations combined. The preparation and supply of material substances afford a means of livelihood to 19 per cent. of the population (actual workers) of whom 12 per cent. are employed in industries, 2 in transport and 5 in trade. The extraction of minerals supports only 2 persons per mille; the civil and military services support 14, the professions and liberal arts 15, and domestic service 18 persons per mille. The difference is due to the extraordinary expansion of trade and industry which has taken place in Western Europe during the last century in consequence of the discovery of the steam engine, and to the great improvement in means of transport and the use of mechanical power in factories of all kinds which have resulted therefrom. In Germany, sixty years ago, the agricultural population was very little less than it is at the present time in India. There are, as we shall see further on, indications that in the latter country also great changes are impending: and it is not unlikely that, as time goes on, the functional distribution of the people will become less dissimilar from that now existing in Europe.

The village.—Until the recent introduction of western commodities, such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete equipment of artisans and menials, and was thus almost wholly self-supporting and independent. Its chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-pressers, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith, etc.

all had their own definite circle within which they worked, and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest, apportioned to them when the crop had been reaped and brought to the threshing floor.

Village sufficiency declining.—Even in India proper the village is no longer the self-contained industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism, which is the result of modern education and western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to replace the prescriptive yearly remuneration by payment for actual work done. In many parts for instance, the village Chamar is no longer allowed the hides of dead cattle as his perquisite, but receives instead a payment for removing the cattle and for skinning them; and the hides are then sold to a dealer by the owner of the animal. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to become localised. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture. The extent to which this disintegration of the old village organisation is proceeding varies considerably in different parts. The change is most noticeable in the more advanced provinces, whereas in comparatively backward tracts, like Central India and Rajputana, the old organisation remains almost intact.

Agriculture.—India is pre-eminently an agricultural country. Of its total population 72 per cent. are engaged in pasture and agriculture, *viz.*, 69 per cent. in ordinary cultivation and 3 per cent. in market gardening, the growing of special products, forestry and the raising of farm stock and small animals. The 217 million persons supported by ordinary cultivation comprise nearly 8 million landlords, 167 million cultivators of their own or rented land, over 41 million farm servants and field labourers and less than a million estate agents and managers and their employes.

On the average, in the whole of India, every hundred cultivators employ 25 labourers, but the number varies in the main provinces from 2 in Assam, 10 in the Punjab, 12 in Bengal and 16 in the United Provinces to 27 in Burma, 33 in Bihar and Orissa, 40 in Madras, 41 in Bombay and 59 in the Central Provinces and Berar. These local variations appear to be independent alike of the fertility of the soil and of the density of population. The conclusion seems to be that the differences are due to social, rather than economic, conditions, and that those provinces have most field labourers which contain the largest proportion of the depressed castes who are hereditary agrestic serfs.

Of the two million persons supported by the growing of special products rather more than half were returned in tea, coffee, cinchona, indigo, etc., plantations and the remainder in fruit, vegetable, betel, vine, arecanut, etc., growers. Of those in the former group, nearly nine-tenths were enumerated in the tea-gardens of Assam (675,000) and Bengal (248,000) and most of the remainder in the coffee, tea, rubber and other plantations of Southern India.

Of the 16 persons per mille who were classed under Raising of farm stock, nearly four-fifths were herdsmen, shepherds, and goatherds, rather more than one-seventh were cattle and buffalo-breeders, and keepers and one-eleventh sheep, goat and pig breeders.

Fishing and Hunting.—In the whole of India about 2 million persons, or 6 per mille subsist by fishing and hunting. Of these, all but a small fraction are fishermen. About half the total number are found in the two provinces of Bengal (644,000) and Madras (313,000). The number who live by this occupation is exceptionally small in the United Provinces (38,000) and Punjab (10,000). The Punjab Superintendent says that, owing to the destruction of immature fish and fry and the obstruction of the free passage of fish to their spawning grounds, the five thousand odd miles of large rivers and major canals in his Province probably produce less food than an equal volume of water in any other part of the world. The sea fisheries of India, though now known to be very valuable, are at present but little exploited.

Mines.—In the whole of India only 530,000 persons or 17 in every ten thousand are supported by the extraction of minerals. Coal mines and petroleum wells account for about half the total number (277,000). The coal fields of Bihar and Orissa support 127,000 persons and those of Bengal 115,000. In the Manbhum district, which contains the Jherria, and part of the Raniganj coal field, 111,000 persons or 7 per cent. of the inhabitants are supported by work in the collieries. Though the Raniganj coal field was discovered as far back as 1774 many years elapsed before much use was made of the discovery. In 1840 the total quantity of coal sent to Calcutta was only 36,000 tons. It rose to 220,000 tons in 1858 and to six million tons in 1901. Since then the growth has been very rapid. The output in 1911 from the coal mines of Bengal and Bihar and Orissa exceeded eleven million tons. In the same year the total yield for all India was twelve million tons. Of the latter quantity nearly one million tons were exported, and four million were used by the railways. The total output however is still trivial compared with that of the United Kingdom, which amounted in 1911 to 272 million tons. Most of the persons employed in the mines of Bengal and Bihar and Orissa are aboriginal or quasi-aboriginal; about half are Bauris and Santals, and many of the remainder belong to the Bhuiya, Chamar or Mochi, Kora, Rajwar, Dosadh and Musahar castes. The great majority are recruited locally. The coal mines of Hyderabad, Assam, the Central Provinces and Berar, and the Punjab support between them only about 27,000 persons.

Metals.—Of the 98,000 persons supported by mining for metals, more than half were returned

in the Mysore State, and of these the great majority were employed in the gold mines of Kolar, where for some years past the value of the gold produced has been about £2,000,000 per annum. The mines in the Central Provinces and Berar, which support 21,000 persons, are principally for the extraction of manganese. The mining of this ore was greatly fostered by the Japanese War, which caused Russia to discontinue her exports of it for the time. There has since been a period of depression, which seems now to have come to an end. Manganese is extracted elsewhere also, *e.g.*, in Mysore and Madras. In Burma tin and lead are extracted as well as silver and wolfram in small quantities. Iron ore is worked in various places, but chiefly in Mayurbhanj which supplies the raw material for Messrs. Tata and Company's ironworks at Sakchi.

Of the 75,000 persons supported by work in quarries and mines for non-metallic minerals, other than coal and salt, two-fifths were enumerated in Bombay, where the quarrying of stone and limestone is an important business chiefly in the neighbourhood of Bombay city. In Bihar and Orissa and Madras mica mining is of some importance.

The extraction of salt and saltpetre supports 78,000 persons. Nearly a third of the total number are found in Bihar and Orissa, where the Nuniyas are still largely employed in digging out and refining saltpetre. This industry is carried on also in the Punjab. Rock salt is mined in the same province and in Rajputana.

The total number of persons employed in the extraction of minerals has risen during the decade from 235 to 517 thousand. The most noticeable increase is in Coal mines and petroleum wells which embrace nearly three times as many persons as in 1901. The bulk of the increase has occurred in Bengal and Bihar and Orissa, but it is to be noted that Hyderabad and the Central Provinces and Berar which now contribute about 12,000 persons to this group gave practically none ten years previously. Miners for metals are 2½ times as numerous as they were in 1901.

Industries.—Of the 35·3 million persons dependent on industrial occupations, nearly one-fourth or 2·6 per cent. of the total population, are supported by textile industries. Of these, the most important, from a numerical point of view, are industries connected with cotton. The number of persons supported by cotton spinning, sizing and weaving is close on 6 millions, and another half million are employed in ginning, cleaning and pressing the raw material. The proportion of the population supported by cotton spinning, sizing and weaving is 37 per mille in the Punjab, 29 in Bombay and Rajputana, 27 in Madras, 22 in the Central Provinces and Berars and 18 in the United Provinces. In Burma, Bihar and Orissa, Bengal and Assam it is much smaller, ranging only from 8 to 11 per mille. Nearly two-fifths of a million persons are supported by rope, twine and string making, and more than a third of a million by jute spinning, pressing and weaving. Other important textile industries are wool spinning and weaving, silk spinning and weaving, and dyeing and printing, etc., each of which supports from a quarter to a third of a million persons. It is clear therefore that so far as India is concerned, in spite of the growing number of cotton mills in the Bombay Presidency and elsewhere, the hand industry still, to a great extent, hold its own. Only 13,000 persons are employed in silk spinning and weaving factories, 7,000 in woollen factories including those for the making of carpets and even smaller numbers in other factories of this class. Some of these textile industries are very local. Those connected with jute are practically confined to Bengal, in which province nine-tenths of the persons supported by them were enumerated. More than half the persons dependent on rope, twine and string making and on working in 'other fibres' chiefly coir, and palmyra fibre were enumerated in Madras and its Native States and a quarter of those supported by wool industries in Hyderabad. Half the silk spinners and weavers are found in two provinces, Bengal and Madras. The dyeing, bleaching and printing of textiles and lace, crape and similar industries are almost unknown in Assam, Bengal, Burma and the Central Provinces and Berar.

Growth of Industry.—As compared with 1901 there has been a decrease of 6·1 per cent. in the number of persons supported by textile industries. This is due mainly to the almost complete extinction of cotton spinning by hand. Weaving by hand has also suffered severely from the competition of goods made by machinery both in Europe and in this country. There has been a large increase in the number of Indian cotton mills, but as the output per head in factories is far greater than that from hand-looms, the addition of a given number of factory hands involves the displacement of a far larger number of hand workers.

Hides.—As compared with 1901, a large decline in the number returned as general workers in hides is partly compensated for by an increase in shoe, boot and sandal makers. In the two heads taken together there has been a drop of about 6 per cent. During the same period the number of hide dealers has more than doubled. Owing to the growing demand for hides in Europe and America and the resulting high prices, the export trade in hides has been greatly stimulated. The local cobbler, on the other hand, having to pay more for his raw material and feeling the increasing competition of machine-made goods has been tempted to abandon his hereditary craft for some other means of livelihood, such as agriculture or work in factories of various kinds.

Woodworkers.—Wood cutting and working and basket making support 2·5 and 1·3 million persons, respectively, or 3·8 million in all. The number of factories devoted to these industries is still inconsiderable. Saw mills and timber yards each employ some 12,000 persons and carpentry works about 5,000. There is only one cane factory with 46 employes.

Metal workers.—The workers in metals are only about half as numerous as those in wood and cane. About three-quarters of the persons in this order are general workers in iron, and one-seventh are workers in brass, copper and bell-metal.

The total number of persons dependent on metal industries shows a decline of 6·6 per cent. as compared with 1901.

Earthenware.—The manufacture of glass, bricks and earthenware supports in all 2·2 milli-

on persons. Seven-eights of these are the ordinary village potters who make the various earthenware utensils for cooking and storing water which are required by the poorer classes, as well as tiles, rings for wells and the like. In most parts of India the potter, like the carpenter, oil-presses, blacksmith and cobbler, is found in practically every village.

Chemicals.—In a country like India, whose economic development is still backward, it is not to be expected that a large number of persons should be engaged in industries connected with chemical products. The total number returned as supported by these industries exceeds a million, but it shrinks to less than 100,000 if we exclude manufacture and refining of vegetable and mineral oils. The 1·1 million persons included in this group are almost entirely village artisans who extract oil from mustard linseed etc., grown by their fellow villagers.

Food Industries.—Of the 3·7 million persons supported by food industries the great majority follow occupations of a very primitive type. Rice pounders and huskers and flour grinders number 1·6 million, grain parchers, etc., 0·6 million, and toddy drawers about the same. There are 352,000 butchers, 281,000 sweetmeat makers, etc., and 97,000 bakers and biscuit makers. The other five heads of the scheme contain between them only 227,000 persons. The principal factories in connection with food industries are flour and rice mills, which employ 42,000 persons, sugar factories 8,000, opium, ganja and tobacco factories 7,000 and breweries 5,000

Dress.—In all 7·8 million persons are supported by industries of dress and the toilet. Of these 1·3 millions are grouped under the head tailors, milliners, dressmakers, etc., and 2·1 million under each of the heads (*a*) shoe, boot and sandal makers, (*b*) washermen, cleaners and dyers, and (*c*) barbers. hair-dressers and wigmakers.

Transport.—Transport supports about five million persons, or 16 per mille of the population, *viz.*, transport by water one million, transport by road 2·8 million, transport by rail one million, and the post, telegraph and telephone services 0·2 million. Transport by water, about three-fifths are owners of country boats and their boatmen; nearly one-sixth are employed on inland steamers and ocean-going vessels of all kinds, one-sixth are engaged in the construction and maintenance of canals, and one-twentieth in the management and upkeep of harbours. Transport by road includes one million carters and cart-owners, more than half a million porters and messengers and considerably less than that number of owners and drivers of pack animals. Palki owners and bearers number 202,000 and persons engaged on road construction and maintenance 563,000.

Trade.—The number of persons dependent on trade for their livelihood is 17·8 millions, or 6 per cent. of the population. Of these, more than half are supported by trade in food stuffs, including 2·9 million grocers and sellers of vegetable oil, salt and other condiments, who are for the most part the petty village shop-keepers, commonly known as salt and oil sellers; 2·2 million grain and pulse dealers; 1·6 million betel leaf, vegetables and fruit sellers, and nearly a million fish vendors. Trade in textiles is the next most important item, supporting 4 per mille of the population. In connection with these figures, it is necessary to draw attention to the great difference which exists between the economic conditions of India and those of Europe. In Europe the seller is almost invariably a middleman, whereas in India he is usually the maker of the article, and is thus classified under the industrial and not the commercial head.

Professions.—The public administration and the liberal arts support 10·9 million persons or 35 per mille, namely, public force 2·4 million, public administration 2·7 million, the professions and liberal arts 5.3 million, and persons of independent means about half a million. The head Public force includes the Army (0·7 million), the Navy (less than 5,000) and the Police (1·6 million). India has practically no navy and her army is exceptionally small, as compared with those of European countries. The number of persons actually employed in it is only 384,000 or 1 per mille of the population, as compared with 4 per mille in England and 10 in Germany. The figures for Police include village watchmen and their families. The real number in this group is greater than that shown in the census tables; many of these village officials have other means of subsistence, and the latter were sometimes shown as their principal occupation. Under the head Public administration are classed only those persons who are directly engaged in the Executive and Judicial administration and their establishments, whether employed directly under Government or under a municipality or other local body. Employees of Government and local bodies who have a specific occupation of their own, such as doctors, printers, school-masters, land surveyors, etc., are shown under the special heads provided for these occupations. Of the 5·3 million persons supported by the professions and liberal arts, Religion accounts for rather more than half, Letters and the arts and sciences for more than a sixth, Instruction and Medicine for one-eighth, and Law for one-eighteenth. The main head Religion contains 1·6 million priests ministers, etc., 0·7 million religious mendicants, 0·4 million pilgrim conductors, circumciser and persons engaged in temples, burial or burning ground service, and 0·06 million catechists and other persons in church and mission service. Of Law, more than half are lawyers, law agents and mukhtiars and the remainder lawyers' clerks and petition writers. More than two-thirds of the persons under the Medical head are medical practitioners of various kinds, including dentists: the remainder are midwives, vaccinators, compounders, nurses, etc. The real number of persons who act as midwives must exceed considerably that shown in the return. This service is usually performed by the wife of the village scavenger or other person of low caste; and she must often have been returned under her husband's occupation. Nearly three-fourths of the persons classed under Letters and the arts and sciences are found in Music composers and masters, players on musical instruments, singers, actors and dancers. The bulk of these are village drummers, whose services are invariably requisitioned on the occasion of marriages and religious festivals.

Factories.—There are in the whole of India 7,113 factories employing 2·1 million persons or 7 per mille of the population. Of these per-

sons, 810,000, or two-fifths of the total number are employed in the growing of special products, 558,000 in textile industries, 224,000 in mines, 125,000 in transport, 74,000 in food industries, 71,000 in metal industries, 49,000 in glass and earthenware industries, the same number in industries connected with chemical products and 45,000 in industries of luxury. Of the special products, tea (703,000 employees) is by far the most important. The number of tea gardens is not much more than double that of coffee plantations, but twelve times as many persons are employed on them. The coffee plantations are four times as numerous as indigo concerns and employ twice as many labourers. Of the labourers on tea gardens, 70 per cent. are returned by Assam and 27 per cent by Bengal. Madras, Mysore and Coorg contain between them practically all the coffee plantations, and Bihar and Orissa all the indigo factories. Of the persons working in mines, 143,000, or 64 per cent. are found in collieries, eight-ninths of them being in the two provinces of Bihar and Orissa and Bengal. The number of persons engaged in gold mines is about one-fifth of the number in the coal mines: nine-tenths of them were returned from Mysore. Of the 558,000 workers in textile industries, cotton mills contribute 308,000 and jute, hemp, etc., 222,000. About two-thirds of the persons employed in cotton mills are found in the Bombay Presidency, from 8 to 9 per cent. in the Central Provinces and Berar and Madras, and about half this proportion in the united Provinces and Bengal. Jute mills are a monopoly of Bengal. Of the industries connected with transport, railway workshops are by far the most important and afford employment to 99,000 persons, or 79 per cent. of the total number of persons engaged in these industries: about one-fourth of them are found in Bengal and one-sixth in Bombay. Of the factories connected with food industries, the most prominent are rice and flour mills. These employ 42,000 persons, of whom nearly three-fourths are engaged in the rice mills of Rangoon and other places in Burma.

Indians and Europeans.—The proportion of Indians to Europeans varies considerably in different classes of factories. The great majority of the larger concerns are financed by European capital, and in such cases management or direction is generally European, and the Indians shown under this head are engaged for the most part on supervision and clerical work. In Assam where 549 tea gardens are owned by Europeans and 60 by Indians, there are 536 European and 73 Indian managers. In the coffee plantations of Madras and Mysore the same principle is apparent. The jute mills of Bengal are financed by European capital and the managers are all Europeans; while in Bombay where Indians own 110 of the cotton spinning and weaving mills, and share 25 with Europeans, and the latter own exclusively only 12, all but 43 of the managers are Indians. Sometimes the proportion of Europeans employed in supervision, etc., varies with the character of the work. In the gold mines where the planning and control of the deep underground workings require a high degree of skill, Europeans outnumber Indians in the ratio of nearly 4 to 1, whereas in the collieries Indians are twelve times as numerous as Europeans.

Anglo-Indians.—Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 100,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000) and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab, it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative, and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians. The Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportions in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists, and Methodists ranges from 2 to 2½ per cent.

THE CENSUS OF 1921.

The Census of India was taken on the night of March 18th. The total population of India as thus ascertained is 319,075,132, *viz.*, British Territory 247,138,396 and Indian States 71,936,736, giving an increase of 3,205,218 in British Territory and 713,518 in Indian States. These figures are provisional, but the experience of previous censuses shows that the difference between the population according to the provisional totals and that as finally ascertained does not amount to more than about 1 in 2,500 persons and the figures are therefore sufficiently accurate for practical purposes.

The proportional variations at each of the last two censuses are given below.—

Variations per cent. since 1901.

	1891 to 1901.	1901 to 1911.	1911 to 1921.
India	+1·5	+6·5	+1·2
Provinces	+3·9	+5·4	+1·3
States	-6·6	+10·3	+1·0

These ratios differ slightly from those in the statements appended, as allowance has been made in the former for the inclusion of new areas. The areas now dealt with for the first time have an estimated population of 86,145 persons.

Unfavourable Features:—The agricultural conditions of the early and middle years of the decade were not unfavourable to the growth of the population. There was some local scarcity but no widespread famine, while the birth rate and survival rate both stood high in 1913 but declined slightly in the subsequent four years. The war, which gave a notable stimulus to the agriculture, industry and trade of the country, had little direct effect on the population figures. The influenza epidemic of 1918 dominates all other direct influences on the movement of the population during the decade. The epidemic left no part of India unvisited. The death rate was nearly double that of the previous year and the direct loss of life due to the ravages of the disease during a few months in 1918 alone is put at about 7 millions in British India, while the indirect effects are shown in the heavy fall in the birth rate in 1919, the births being less than the deaths in both 1918 and 1919. Apart from the influenza epidemic, the later years of the decade were generally unhealthy. Plague which had been virulent in 1915 in the Northern and Western portions of the country again took a heavy toll in 1917 and 1918. The general failure of the rains of 1918 caused widespread distress over a large part of the country and the mortality from cholera in 1918-19 was exceptionally high. In the last year of the decade a large part of the country had again to face a serious failure of the monsoon. Further analysis of the conditions affecting the movement of the population must be postponed till the Census figures are available in their final form; but the figures given in the statements show the extent to which the normal growth of the population has, in the greater part of the country, been set back by the terrible visitation of 1918 and the subsequent unhealthy season.

POPULATION OF PROVINCES AND STATES AND VARIATION SINCE 1891.

The population returned at previous Censuses has been corrected, as far as possible, in order to allow for subsequent inter-provincial transfers.

The population of Benares State (total 357,838, males 177,869, females 179,969), which was included under the head "British territory" in 1911, has now been included under the head "Indian States." Delhi and Gwalior, which in 1911 were classed under the Punjab and Central India Agency respectively, are now shown separately. The figures for the Madras States include those of Cochin and Travancore, the figures of these States being also shown separately.

The political control of Aden, which is still technically a part of the Bombay Presidency, is with the British Government, but as its general administration is still directly under the Government of Bombay, Aden has been shown for the purpose of the Census as part of the Bombay Presidency.

The population of the French Settlements in India which is not included in this table is according to the Provisional Totals 269,579 (Males 133,251, Females 136,328).

Province, State or Agency.	Population, 1921.			Variation, 1911—21. Increase (+). Decrease (—).	
	Total.	Males.	Females.	Actual.	Per cent.
1	2	3	4	5	6
INDIA.	319,075,132	164,056,191	155,018,941	+ 3,918,736	+ 1·2
Provinces.	247,138,396	126,941,215	120,197,181	+ 3,205,218	+ 1·3
1. Ajmer-Merwara ..	495,899	269,867	226,032	5,496	—1·1
2. Andamans and Nicobars . ..	26,833	20,393	6,440	+ 374	+ 1·4
3. Assam . ..	7,598,861	3,955,665	3,643,196	+ 884,562	+ 13·2
4. Baluchistan ..	421,679	255,566	166,113	+ 7,267	+ 1·8
(*Districts and Administered Territories*)					
5. Bengal	46,653,177	24,130,621	22,522,556	+ 1,170,572	+ 2·6
6. Bihar and Orissa ..	33,998,778	16,767,112	17,231,666	— 490,766	-1·4
Bihar ..	29,378,758	14,585,798	14,792,960	- 373,671	—1·6
Orissa .	4,968,106	2,354,855	2,613,551	-163,317	—3·2
Chota-Nagpur .	5,651,614	2,826,459	2,825,155	+ 46,252	+ ·8
7 Bombay (Presidency)	19,338,586	10,164,934	9,173,652	- 357,680	- -1·8
Bombay .	16,005,170	8,291,890	7,713,280	—131,496	— ·8
Sind .	3,278,493	1,836,166	1,442,327	-234,942	—6·7
Aden . .	54,923	36,878	18,045	+ 8,758	+ 19·0
8. Burma	13,205,564	6,750,781	6,454,783	+ 1,090,347	+9·0
9. Central Provinces and Berar .	13,908,514	6,948,985	6,959,529	7,644	—·1
Central Provinces.	10,827,302	5,379,741	5,447,561	—31,694	— ·3
Berar . ..	3,081,212	1,569,244	1,511,968	+ 24,050	+ ·8
10 Coorg . ..	164,459	89,851	74,608	— 10,517	—6·0
11. Delhi ..	486,741	280,709	206,032	+ 73,294	+17·7
12 Madras	42,322,270	20,884,233	21,438,037	+ 916,866	+ 2·2
13. North-West Frontier Province	2,247,696	1,226,791	1,020,905	+ 50,763	+ 2·3
(*Districts and Administered Territories*)					
14. Punjab	20,678,393	11,300,955	9,377,438	+1,099,820	+ 5·6
15. United Provinces of Agra and Oudh. ..	45,590,946	23,894,752	21,696,194	— 1,216,544	—2·6
Agra	33,420,638	17,593,757	15,826,881	— 828,848	—2·4
Oudh	12,170,308	6,300,995	5,869,313	—387,696	—3·1
States and Agencies	71,936,736	37,114,976	34,821,760	+ 713,518	+1·0
16. Assam State (Manipur)	383,672	187,951	195,721	+ 37,450	+ 10·8
17. Baluchistan States .	378,999	205,988	173,011	—41,292	—9·8
18. Baroda State ..	2,121,875	1,098,054	1,023,821	+89,077	+4·4
19. Bengal State ..	896,173	476,644	419,529	+ 73,608	+8·9

Province, State or Agency.	Population, 1921.			Variation, 1911—21. Increase (+). Decrease (−).	
	Total.	Males.	Females	Actual	Per cent.
1	2	3	4	5	6
20. Bihar and Orissa States	3,965,431	1,947,668	2,017,763	+20,222	+·5
21. Bombay States .	7,412,341	3,771,186	3,641,155	+24,290	+·3
22. Central India Agency	6,004,581	3,072,769	2,931,812	—135,114	—2·2
23. Central Provinces States .. .	2,068,482	1,029,507	1,038,975	—48 670	—2·3
24. Gwalior State .	3,175,822	1,686,176	1,489 646	—41,163	—1·3
25. Hyderabad State ..	12,453,627	6,331,984	6,121,643	—921,049	—6·9
26. Kashmir State	3,322,030	1,757,902	1,564,128	+162,904	+5·2
27. Madras States ..	5,460,029	2,745,715	2,714,314	+648,188	+13·5
Cochin States.	979,019	483,834	495,185	+60,909	+6·6
Travancore State	4,005,849	2,032,306	1,973,543	+576,874	+16·8
28. Mysore State ..	5,976,660	3,045,999	2,930,661	+170,467	+2·9
29. North-West Frontier Province .. (*Agencies and Tribal Areas.*)	2,828,055	1,520,672	1,307,383	+1,205,961	+74·3
30. Punjab States ..	4,415,401	2,425,191	1,990,210	+202,607	+4·8
31. Rajputana Agency .	9,857,012	5,189,765	4 667,247	—673,420	—6·4
32. Sikkim State .	81,722	41,502	40,220	—6,198	—7·0
33. United Provinces States . .	1,134,824	580,303	554,521	—55.050	—4·6

POPULATION OF PRINCIPAL TOWNS.

In the towns noted below, where plague was prevalent at the time of the Census of 1911, many of the inhabitants were absent from their homes and the population shown in this table is far less than it would otherwise have been. The population of these towns for 1911 according to the returns of a fresh Census taken after the epidemic had subsided is noted below :—

Province.	Town.	Persons	Males.	Females.
Bihar and Orissa	Gaya	70,423	38,717	31,706
Central Provinces	Nagpur	134,008	70,441	63,567
United Provinces	Cawnpore	195,498	115,243	80,255
Central India	Indore	68,733	37,910	30,823
Gwalior	Lashkar	72,409	39,945	32,464

Town.	Population, 1921.	Variation, 1911-21. Increase (+). Decrease (—).		Remarks.
	Total.	Actual.	Per cent.	
1	2	3	4	5
AJMER-MERWARA.				
Ajmer	114,196	+27,974	+32·4	
BALUCHISTAN.				
Quetta	48,933	+15,011	+44·3	
BENGAL.				
Calcutta with Suburbs and Howrah. ..	1,263,292	+40,979	+3·4	
Calcutta Proper	903,173	+7,106	+·8	
Howrah	192,758	+13,752	+7·7	
Manicktola	66,750	+12,983	+24·1	
Cossipore-Chitpur	56,549	+8,371	+17·4	
Garden Reach	44,062	—1,233	—2·7	
Dacca	117,304	+8,753	+8·1	
BIHAR AND ORISSA.				
Patna	120,109	—16,044	—11·8	
Bhagalpur	68,833	—5,516	—7 4	
Gaya	67,759	+17,838	+35 7	
BOMBAY.				
Bombay	1,172,953	+193,508	+19·8	
Ahmedabad	274,202	+41,425	+17·8	
Poona	176,671	+17,271	+10·8	
Karachi	215,781	+63,878	+42·1	
Surat	118,299	+3,431	+3·0	
BURMA.				
Rangoon	339,527	+46,211	+15·8	
Mandalay	147,429	+9,130	+6 6	
CENTRAL PROVINCES AND BERAR.				
Nagpur	149,522	+48,107	+47·4	
Jubbulpore	108,973	+8,322	+8·3	
DELHI.				
Delhi	303,148	+70,311	+30·2	
MADRAS.				
Madras	522,951	+4,291	+·8	
Madura	138,894	+3,779	+2·8	
Trichinopoly	119,521	—3,991	—3·2	
Calicut	81,995	+3,578	+4·6	
Salem	52,270	—6,936	—11·7	
N.-W. F. PROVINCE.				
Peshawar	93,884	—4,051	—4·1	
PUNJAB.				
Lahore	279,558	+50,871	+22·2	
Amritsar	160,409	+7,653	+5·0	
Multan	86,251	—12,992	—13·1	
Rawalpindi	97,983	+11,500	+13·3	
Ambala	76,497	—3,634	—4·5	

City.	Population, 1921.	Variation, 1911–21. Increase (+). Decrease (—).		Remarks.
	Total.	Actual.	Per cent.	
1	2	3	4	5
UNITED PROVINCES OF AGRA AND OUDH.				
Lucknow	243,553	—8,561	—3·4	
Benares	199,993	—3,811	—1·9	
Agra	185,946	+497	+·3	
Cawnpore	213,044	+34,487	+19·3	
Allahabad	155,970	—15,727	—9·2	
Bareilly	127,939	—1,523	—1·2	
Meerut	122,567	+5,936	+5·1	
Moradabad	82,713	+1,595	+2·0	
Rampur	73,200	—1,116	—1·5	
BARODA.				
Baroda	94,742	—4,603	—4·6	
CENTRAL INDIA AGENCY.				
Bhopal	5,054	—11,150	—19·8	
Indore	92,993	+48,046	+106·9	
GWALIOR.				
Lashkar	76,849	+20,662	+36·8	
HYDERABAD.				
Hyderabad	404,225	—97,421	—19·4	
KASHMIR.				
Srinagar.	141,631	+11,430	+8·8	
MYSORE.				
Bangalore (including Civil and Military Station.)	238,111	+48,626	+25·7	
Mysore	83,932	+12,626	+17·7	
RAJPUTANA AGENCY.				
Jaipur	121,196	—16,902	—12·3	
Jodhpur	73,480	+14,218	+24·0	
Bikaner	69,448	+13,622	+24·4	
Alwar	44,782	+3 477	+8·4	

Domestic Servants.

The relationship of master to servant in India is a subject to which attention is frequently directed in the Press by complaints about the alleged deterioration of domestic servants and the hardships to which employers are subjected by the boycotting action of discharged servants. The remedy most commonly propounded for misbehaviour on the part of servants is registration with a view to checking the use of false testimonials, or "chits," and to enabling masters to obtain certain information as to the character of the persons they employ. This mode of procedure is of German origin, for the old Prussian Servants' Ordinances (Gesindeordnung) were supplemented in 1854 by a law, applying only to agricultural labourers and domestic servants, which punishes breach of contract, and since then various State laws dealing with domestic servants have been passed in Germany. The conditions are not, however, analogous for the servant keeping class in India is proportionately larger than in Europe, as also is the number of servants kept by each individual.

The first attempt in the East to deal with the problem by legislation was made in **Ceylon.** The act dealing with the registration of domestic servants in that Colony is comprised in Ordinance No. 28 of 1871. It extends to all classes of domestic servants, hired by the month or receiving monthly wages, and the word 'servant' means and includes head and under-servants, female servants, cooks, coachman, horsekeepers and house and garden coolies The Act came into operation in 1871 and empowered the Governor to appoint for the whole of the Island or for any town or district, to which the Ordinance is made applicable, a registrar of domestic servants, who is to be under the general supervision and control of the Inspector-General of Police. A registry is kept by the registrar of all domestic servants employed within his town or district, and he has to enter therein the names of all the servants, the capacities in which they are employed at the time of such registration, the dates of their several engagements and such memorandum of their previous services or antecedents as they may desire to have recorded in the register. But the registrar must, previous to his entering all these details, satisfy himself as to the credibility of the statements made to him. Any person, who may not have been a domestic servant before, but who is desirous of entering domestic service, has to submit an application to the registrar, and if the registrar is satisfied that there are reasonable grounds to believe that the applicant is a fit and proper person to enter domestic service he shall enter his name in the register, recording what he has been able to learn respecting the person's antecedents together with the names of any persons who are willing to certify as to his respectability. If the applicant is unable to produce satisfactory or sufficient evidence as to his fitness for domestic service, the registrar may grant him "provisional" registration, to be thereafter converted into "confirmed" registration according to the result of his subsequent service. If the registrar is satisfied that the applicant is not a fit and proper person he should withhold registration altogether, but in such a case he must report his refusal to register to the Inspector-General of Police.

Every person whose name has been registered in the general registry is given a pocket register containing the full particulars of the record made in the general registry. No person can engage a servant who fails to produce his pocket register or whose pocket register does not record the termination of his last previous service, if any. On engaging a servant the master has to enter forthwith in the pocket register the date and capacity in which such servant is engaged and cause the servant to attend personally at the registrar's office to have such entry inserted in the general registry. Similarly, in case the master discharges a servant he must insert in the pocket register the date and cause of his discharge and the character of the servant. Provided that if for any reason he be unwilling to give the servant a character or to state the cause of his discharge he may decline to do so. But in such a case he must furnish to the registrar in writing his reasons for so refusing. If the servant on dismissal fails to produce his pocket register the master must notify that fact to the registrar. Whenever any fresh entry is made in the pocket register the servant is bound to attend the registrar's office to have such an entry recorded in the general registry. Every servant whose name is registered shall, if he subsequently enters service in any place not under the operation of the Ordinance, attend personally at the nearest police station on his entering or leaving such service and produce his pocket register to the principal officer of police at such station in order to enable the police officer to record the commencement or termination of the service. The police officer has then to communicate it to the registrar of the town or district in which such servant was originally registered.

Various **penalties of fine** as well as of imprisonment are imposed for violation of any of the acts required to be done or duties imposed by the Act on the various persons mentioned below. As respects masters if they fail to fulfil any of the duties imposed on them by the Act they expose themselves to a liability of their being fined to the extent of Rs. 20. Similarly a servant, who fails to fulfil any of the duties imposed on him by the Act is liable to pay a fine not exceeding Rs. 20. But in case he gives any false information to the registrar or to any other person on matters in which he is required by this Ordinance to give information, he is liable to a fine not exceeding Rs. 50 or to imprisonment, with or without hard labour, not exceeding 3 months. A fee of 25 cents is charged to the master on engaging a new servant, a like fee of 25 cents is charged to the servant on his provisional registration, or on registration being confirmed, or for registration of previous service or antecedents. But in case of loss or destruction of the pocket register the servant has to pay one rupee for the issue of a duplicate pocket register.

A similar Ordinance (No. 17 of 1914) has been introduced in the **Straits Settlements,** where its operation has been limited to such local areas as may be declared by the Governor in Council, and its application within such areas has been restricted to the class of householders who are expected to desire the benefit of the provisions.

Education.

Indian education is unintelligible except through its history. Seen thus, it affords the spectacle of a growth which, while to one it will appear as a blunder based on an initial error easily avoided, to another it stands out as a symbol of sincerity and honest endeavour on the part of a far-sighted race of rulers whose aim has been to guide a people alien in sentiments and prejudices into the channels of thought and attitude best calculated to fit them for the needs of modern life and western ideals. There is to-day no subject in the whole area of administrative activity in India which presents greater complexities and differences of opinion than education. The Indian, stung to the quick by the illiteracy around him, demands a very rapid expansion of educational facilities, with perhaps an insufficient regard for the formulation of a policy to regulate such an expansion; the official, overweighted by his responsibility for the maintenance of law and order, is apt to look with disfavour upon the activities of private enterprise in the field of education and, in his efforts to improve the quality, to disregard the quantity of training to be provided in the schools and colleges and the teacher, harassed by annoying restrictions on his freedom and disheartened by his poverty, is disinclined for changes lest they make his lot even more intolerable than before.

The Introduction of Western Learning—In the early days of its dominion in India, the East India Company had little inclination for the doubtful experiment of introducing western learning into India. Warren Hastings, the dominating figure of the time, was a genuine admirer of the laws and literature of the East. His policy was to enable the ancient learning to revive and flourish under the protection of a stable government, and to interfere as little as possible with the habits and customs of the people. Even the Act of 1813 which set apart a lakh of rupees for the introduction and promotion of a knowledge of the sciences was interpreted as a scheme for the encouragement of Sanskrit and Arabic. In the following year the Court of Directors instructed the Governor-General to leave the Hindus "to the practice of usage, long established among them, of giving instruction in their own homes, and to encourage them in the exercise and cultivation of their talents by the stimulus of honorary marks of distinction and in some cases by grants of pecuniary assistance."

It was from sources other than Government that the **desire for western knowledge** arose in India. In 1816, David Hare, an English watchmaker in Calcutta, joined hands with the enlightened Brahmin, Mohan Roy, to institute the Hindu College for the promotion of western secular learning. The new institution was distrusted both by Christian missionaries and by orthodox Hindus, but its influence grew apace. Fifteen years later, the Committee of Public Instruction in Bengal reported that a taste for English had been widely disseminated and that independent schools, conducted by young men reared in the Hindu College, were springing up in every direction. In Bombay, the Elphinstone Institution was founded in memory of the great ruler who left India in 1827. A still more remarkable innovation was made in 1835 by the establishment of the Calcutta Medical College, whose object was to teach "the principles and practice of medical science in strict accordance with the mode adopted in Europe." Many pronounced the failure of the undertaking to be inevitable; for, under the Hindu custom the higher castes were forbidden to touch the dead. This obstacle was surmounted by Madusudan Gupta who, with a few courageous pupils, began the dissection of a human body. From that time onward Indians of the highest castes have devoted themselves with enthusiasm and with success to the study of medicine in all its branches.

Another impetus to the introduction of western learning was the devotion of **Christian missionaries.** The humanitarian spirit, which had been kindled in England by Wesley, Burke and Wilberforce, influenced action also in India. Carey, Marshman and Ward opened the first missionary College at Serampore in 1818; and twelve years later, Alexander Duff reversed the whole trend of missionary policy in India by his insistence on teaching rather than on preaching, and by the foundation of his school and College in Calcutta. In Madras, the missionaries had been still earlier in the field; for as early as in 1787 a small group of missionary schools were being directed by Mr. Schwarz. The Madras Christian College was opened in 1837. In Bombay, the Wilson School (afterwards College) was founded in 1834.

Lord W. Bentinck's minute of 1835 (based upon Macaulay's famous minute) marks the somewhat tardy acceptance by Government of the new policy. Government then determined, while observing a neutrality in religious matters to devote its available funds to the maintenance of secondary schools and colleges of western learning to be taught through the medium of English. But this decision did not entail that Oriental learning should be neglected: still less that the development of the vernaculars should be discouraged. Other changes powerfully contributed to the success of the new system. The freedom of the press was established in 1835; English was substituted for Persian as the language of the Courts in 1837 and in 1841 Sir Henry Hardinge ordained that preference in Government appointments should be given to those who had received a western education. In the following decade the new learning took firm root in India; and, though he Muhammadans still held aloof, the demand for English schools outstripped the means of Government for providing them.

Statement of Educational Progress in INDIA.

	1914-15. †	1915-16	1916-17. ‡	1917-18	1918-19.	1919-20.
Area in square miles	1,029,399	1,032,011	1,034,716	1,088,807	1,088,807	1,088,807
Population { Male	124,182,692	124,190,762	124,747,805	124,747,811	124,747,805	124,747,805
Population { Female	118,806,255	118,812,827	119,273,295	119,273,295	119,273,295	119,272,295
Total Population	242,988,947	243,003,499	244,021,100	244,021,106	244,021,100	244,020,100
Public Institutions for Males.						
Number of arts colleges	136	136	122	126	134	138
Number of high schools*	1,382	1,440	1,584	1,659	1,803	1,910
Number of primary schools	116,012	120,858	124,081	128,480	129,803	133,585
Male Scholars in Public Institutions.						
In arts colleges	41,441	35,349	46,293	49,527	49,815	51,458
In high schools *	483,249	502,681	547,313	563,731	584,270	597,969
In primary schools	4,518,004	4,645,046	4,782,605	5,855,571	4,821,611	4,956,988
Percentage of male scholars in public institutions to male population.	4·6	4·7	4·8	4·9	4·9	5·1
Public Institutions for Females.						
Number of arts colleges	11	11	12	12	12	12
Number of high schools*	158	158	166	177	183	203
Number of primary schools	15,700	17,231	18,122	19,395	20,418	21,759
Female Scholars in Public Institutions.						
In arts colleges	406	469	842	914	915	1,024
In high schools*	22,234	23,354	24,948	27,222	29,980	34,06
In primary schools	929,846	993,198	1,036,125	1,077,170	1,119,871	1,176,533
Percentage of female scholars in public institutions to female population.	·89	·94	·97	99	1·04	1·10
TOTAL SCHOLARS in public institutions { Male	5,762,417	5,871,184	6,050,846	6,119,423	6,098,129	6,306,128
TOTAL SCHOLARS in public institutions { Female	1,054,161	1,112,024	1,156,468	1,192,319	1,240,534	1,306,711
TOTAL SCHOLARS in public institutions Total	6,816,578	6,983,208	7,207,308	7,311,742	7,338,663	7,612,839
TOTAL SCHOLARS (both male and female) in all institutions	7,448,419	7,617,496	7,851,946	7,948,068	7,936,577	8,206,225
Percentage of total scholars to population. { Male	5·1	5·2	5·3	5·36	5·31	5·47
Percentage of total scholars to population. { Female.	·95	1·0	1·0	1·06	1·10	1·15
Percentage of total scholars to population. Total	3·0	3·1	3·2	3·26	3·25	3·36
Expenditure (in thousands of rupees).	Rs	Rs.	Rs	Rs.	Rs.	Rs.
From provincial revenues	4,22,72	3,94,90	3,91,63	4,90,92	5,43,26	6,31,62
From local funds	1,66,79	1,80,38	1,73,78	1,16,49	1,27,22	1,53,96
From municipal funds	43.51	46,41	49.39	40,61	46,78	59.05
Total Expenditure from public funds	6,33.02	6,21.69	6,14.80	6,48,02	7,17,26	8,44,63
From fees	2,85.68	3,03,51	3,18.71	3,53.50	3,54,66	3,68,81
From other sources	1,73.05	1,83.09	1,95,42	2,00,57	2,26,71	2,75,53
GRAND TOTAL OF EXPENDITURE	10,91.70	11,08.29	11,28.83	11,82,09	12,98,63	14,88,97

* High schools include vernacular high schools also, in some provinces

† The statistics of Native States have been excluded from the Tables for 1914–15 and succeeding years

‡ The figures for 1916-17 include for the first time, statistics relating to *Ajmer-Merwara, Baluchistan* and *Bangalore.*

GROWTH AND ORGANISATION OF ENGLISH EDUCATION.

An epoch in Indian educational history is marked by Sir Charles Wood's despatch in 1854. Perhaps its most notable feature was the emphasis which it laid on the importance of primary education. The old idea that the education imparted to the higher classes of society would filter down to the lower classes was discarded. The new policy was boldly "to combat the ignorance of the people which may be considered the greatest curse of the country." For this purpose Departments of Public Instructions were created on lines which do not differ very materially from the Departments of the present day. The despatch also broke away from the practice followed since 1835 whereby most of the available public funds had been expended upon a few Government schools and colleges, and instituted a policy of grants-in-aid to private institutions "Such a system as this placed in all its degrees under efficient inspection, beginning from the humblest elementary institution and ending with the university test of a liberal education would impart life and energy to education in India, and lead to a gradual but steady extension of its benefits to all classes of people." Another feature of the despatch was an outline of a university system which resulted in the foundation of the Universities of Calcutta, Madras and Bombay three years later. The affiliating type of university then became the pivot of the Indian education system. It has undoubtedly been of value in several ways. It enabled Government to select recruits for its service on an impartial basis : it did much, through the agency of its Colleges to develop backward places ; it accelerated the conversion of Hindus to a zeal for western education ; and it cost little at a time when money was scarce. On the other hand, the new universities were not corporations of scholars, but corporations of administrators ; they did not deal directly with the training of men, but with the examination of candidates; they were not concerned with learning, except in so far as learning can be tested by examination. The colleges were fettered by examination requirements and by uniform courses; their teachers were denied that freedom which teachers should enjoy ; and their students were encouraged not to value training for its own sake but as a means for obtaining marketable qualifications. In certain important respects the recommendations in the despatch were not followed. The Directors did not intend that university tests, as such, should become the sole tests qualifying for public posts: they also recommend the institution of civil service examinations. They did not desire the universities to be deprived of all teaching functions: they recommend the establishment of university chairs for advanced study. They were aware of the dangers of a too literary course of instruction : they hoped that the system of education would rouse the people of India to develope " the vast resources of their country.....and gradually, but certainly, confer upon them all the advantages which accompany the healthy increase of wealth and commerce. The encouragement of the grant-in-aid system was advocated to an even greater extent by the Education Commission of 1882, which favoured the policy of withdrawing higher education from the control of Government within certain limits and of stimulating private effort. In theory the decision was correct, but in practice it was irretrievably wrong. In its fatal desire to save money, Government deliberately accepted the mistaken belief that schools and colleges could be maintained on the low fees which the Indian parent could be expected to pay. And, in the course of time, an unworkable system of dual control grew up, whereby the Universities with no funds at their disposal were entrusted with the duty of granting recognition to schools and the Departments of Public Instruction were encouraged to cast a blind eye on the private institutions and to be content with the development of a few favoured Government institutions. There can be little wonder that, under such a system of neglect and short-sightedness, evils crept in which can now only be removed by drastic changes and by lavish expenditure.

The Reforms of 1902-4.

In 1902, the Universities Commission was appointed by Lord Curzon's Government, and its investigation was followed by the Universities Act of 1904. The main object of the Act was to tighten up control, on the part of Government over the universities, and on the part of the universities over the schools and colleges. The Chancellors of the Universities were empowered to nominate 80 *per cent.* of the ordinary members of the Senates and to approve the election of the remainder ; the Government retained the power of cancelling any appointment, and all university resolutions and proposals for the affiliation or disaffiliation of colleges were to be subject to Government sanction The universities were given the responsibility of granting recognition to schools and of inspecting all schools and colleges, the inspection of schools being ordinarily conducted by the officers of the Department of Public Instruction. Permission was also given to the universities to undertake direct teaching functions and to make appointments, subject to Government sanction, for these objects: but their scope was in practice limited to post-graduate work and research. The territorial limits of each university were defined, so that universities were precluded from any connexion with institutions lying outside those boundaries. Neither the Commission nor the Government discussed the fundamental problems of university organisation, but dealt only with the immediate difficulties of the Indian system. They did not inquire whether the affiliating system could be replaced by any other mode of organisation, nor whether all schools might be placed under some public authority which would be representative of the universities and of the departments. They assumed the permanent validity of the existing system, in its main features, and set themselves only to improve and to strengthen it.

Recent Developments.

Since the passing of the Universities Act of 1904, there has been a considerable expansion of the educational system. The two tables given below afford useful comparisons with previous years and serve to illustrate the growth and expansion of education in India.

(*a*) STUDENTS.

Year.	In Public Institutions.			In All Institutions (Public & Private).		
	Males.	Girls.	Total.	Males.	Girls.	Total.
1891-92	3,041,510	307,400	3,348,910	3,517,778	339,043	3,856,821
1896-97	3,428,376	366,006	3,788,382	3,954,712	402,158	4,356,870
1901-02	3,493,325	393,168	3,886,493	4,077,430	444,470	4,521,900
1906-07	4,164,832	579,648	4,744,480	4,743,604	645,028	5,388,632
1911-12	5,253,065	875,660	6,128,725	5,828,182	952,539	6,780,721
1915-16	5,871,184	1,112,024	6,983,208	6,431,215	1,186,281	7,617,496
1916-17	6,050,840	1,156,468	7,207,308	6,621,527	1,230,419	7,851,946
1917-18	6,119 423	1,192,309	7,311,742	6,683,879	1,264,189	7,948,068
1918-19	6,098,129	1,240,534	7,338,663	6,623,149	1,313,428	7,936,577
1919-20	6,306,128	1,306,711	7,612,839	6,829,204	1,377,021	8,206,225

(*b*) EXPENDITURE.

Year.	Direct Expenditure.		Direct and Indirect.	
	Public Funds.	Total.	Public Funds.	Total.
	Rs.	Rs.	Rs.	Rs.
1891-92	1,07,55,368	2,40,93,149	1,56,18,184	3,05,19,632
1896-97	1,19,85,647	2,77,38,737	1,67,65,650	3,52,44,900
1901-02	1,26,28,586	3,06,37,633	1,77,03,968	4,01,21,462
1906-07	1,88,31,204	3,88,67,352	2,96,34,574	5,59,03,673
1911-12	2,57,57,212	5,39,41,277	4,05,23,072	7,85,92,605
1915-16	3,96,61,135	7,47,43,004	6,21,68,904	11,08,29,249
1916-17	4,18,12,109	7,92,86,819	6,14,80,471	11,28,83,068
1917-18	4,41,73,343	8,36,68,551	6,46,01,690	11,82,09,137
1918-19	5,02,71,231	9,18,49,130	7,17,26,292	12,98,83,073
1919-20	5,91,69,207	10,34,29,768	8,44,63,472	14,88,91,960

In 1919-20 the total expenditure on education amounted to Rs. 14,88,96,960, of which Rs. 8,44,63,472 came from public funds. In spite of this marked advance, there is much lee-way to make up, as in the last census report the literate population of India was only 59 per thousand (males 186 and females 10 per thousand).

Imperial Grants —No new imperial grants were made during the year 1919-20, but a lakh was given to the Benares Hindu University and a lakh to the Sir J. C. Bose Institute at Calcutta from the Education Department's reserve The annual assignment now amounts to 21¼ lakhs, apart from the capital grants.

Primary Education.—The primary schools are mainly under the direction of the local boards and municipalities. In 1911, the late Mr. G. K. Gokhale pleaded in the Imperial Legislative Council for a modified system of compulsory primary education, but Government was unable to accept the proposal. In recent years, legislation has been approved by certain of the provincial legislative councils whereby municipalities are empowered to impose a system of compulsory primary education within their areas. Primary Education Acts have now been passed in Bombay, Bengal Madras, the United Provinces, the Punjab, Bihar and Orissa and the Central Provinces.

The main characteristic of these bills is that the adoption of compulsion is left to the local bodies. Compulsory education is to be free in *Bombay*, the *United Provinces* and the *Punjab*, but in other provinces remission of fees is provided for under certain conditions. Parents and employers preventing children from complying with the Acts are liable to be fined, but provision is made for the exemption from the operation of the Acts of particular classes or communities. Additional taxation is also provided for. The Bengal Act goes somewhat further than the other Acts in requiring all municipalities to undertake at once a survey of the condition of primary education in municipal areas.

Secondary and High School Education. —The policy of Government is to maintain a small number of high schools (roughly one for each revenue district) which are to be regarded as models for private enterprise, and to aid private institutions. In 1911-12 there were 1,219 high schools for boys in India and in 1919-20 the number had risen to 1,910, the number of scholars in the former year being 390,881, and in the latter year 598,785. Some attempts have been made to give a greater bias towards a more practical form of instruction in these schools. The Commission of 1882 suggested that there should be two sides in secondary schools," one leading to the entrance examination of the universities, the other of a more practical character, intended to fit youths for commercial and other non-literary pursuits." Some years later, what were called B and C classes were started in some schools in Bengal, but, as they did not lead to a university course, they have not been successful. In more recent years, the Government of India have advocated the institution of a school *final* examination in which the more practical subjects may be included. Efforts have also been made to improve the conduct of the matriculation and to emphasise the importance of oral tests and of school records. In Madras, this examination, which was placed under the direction of a Board representative of the University and of Government, has proved somewhat cumbrous and certain modifications are being made In the United Provinces, only the better schools are privileged to prepare for the School Final Examination so that better results have been achieved. In the Punjab and in Bombay, the school leaving examination is conducted by Boards. But the main difficulty has not yet been touched. The University which recognises the schools has no money wherewith to improve them: and the Department of Public Instruction, which allots the Government grants, has no responsibility for the recognition of schools, and no connexion whatever with the private unaided schools. This dual authority and thus division of responsibility have had unhappy effects. The standard of the schools also is very low so that the matriculates are often unable to benefit by the college courses. In Mysore, the standard of the schools has been raised by withdrawing from the University the first year's classes and by placing them in a number of the better schools in the State.

There are schools for Europeans and Eurasians which are placed under the control of special inspectors for European Schools. The education of the domiciled community has proved to be a perplexing problem, and in 1912 a conference was summoned at Simla to consider the matter. The difficulty is that European Schools are very remote from the general system of education in India.

Intermediate Colleges —The Calcutta University Commission recommended that the intermediate section of University education should be recognised as part of school education and should be separated from the University organisation Certain provinces (*e. g.*, Bombay, the United Provinces, and the Punjab) are taking steps towards the fulfilment of this suggestion and the experiment is being watched with interest. The suggestion of the Commission has also been incorporated in the schemes for the new universities at Aligarh and Lucknow.

The Arts Colleges.—Affiliated to the universities are colleges which the University concerned has the power under the Act of 1904 to inspect and to regulate. In 1920, there were 150 arts colleges in British India; and there were in these 51,680 male, and 802 female students. The increase in the number of students during the quinquennium (1912-1917) was 58·9 per cent. The universities are empowered to make regulations for the residence of students, but, owing to the limited provision of hostels, it is difficult for the colleges to comply with these regulations. With the assistance of Imperial grants many new hostels have been built in Calcutta. The main weakness of the arts colleges is that they vary much in efficiency with the result that the standard and scope of their work tends to be regulated by the weaker colleges. In many cases the pay and conditions of service of the teachers are very unsatisfactory. Each college again forms a water-tight compartment, there being very little co-operation among the colleges.

Statement of Educational Progress in MADRAS.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	142,330	No change.	No change.	No change.	No change.	No change.
Population { Male	20,384,955					
Population { Female	21,022,449					
Total Population	41,405,404					
Public Institutions for Males.						
Number of arts colleges	34	37	35	33	42	44
Number of high schools	182	183	188	196	215	227
Number of primary schools	23,917	28,166	28,881	29,862	29,952	31,002
Male Scholars in Public Institutions.						
In arts colleges	8,180	8,469	7,726	8,090	8,021	8,206
In high schools	93,367	97,993	103,035	107,546	111,053	115,956
In primary schools	999,685	1,048,380	1,071,636	1,092,619	1,081,861	1,101,180
Percentage of male scholars in public institutions to male population.	5·6	5·9	6·0	6·1	6·1	6·3
Public Institutions for Females.						
Number of arts colleges	3	3	3	3	3	3
Number of high schools	35	35	36	37	41	47
Number of primary schools	1,527	1,619	1,692	1,860	2,057	2,376
Female Scholars in Public Institutions.						
In arts colleges	104	134	184	210	228	270
In high schools	5,929	6,223	6,558	6,769	7,224	8,687
In primary schools	265,623	280,558	293,185	309,155	319,133	342,940
Percentage of female scholars in public institutions to female population.	1·3	1·4	1·4	1·4	1·6	1·7
TOTAL SCHOLARS in public institutions { Male	1,147,713	1,198,328	1,229,914	1,256,364	1,249,312	1,276,528
TOTAL SCHOLARS in public institutions { Female	277,187	293,617	307,125	323,380	333,775	349,241
Total	1,417,840	1,491,945	1,537,039	1,579,744	1,583,087	1,625,769
TOTAL SCHOLARS (both male and female) in all institutions.	1,542,955	1,615,159	1,661,012	1,696,539	1,692,951	1,730,040
Percentage of total scholars to population. { Males	6·1	6·4	6·5	6·6	6·6	6·7
Percentage of total scholars to population. { Females	1·4	1·5	1·5	1·6	1·7	1·8
Total	3·7	3·9	4·0	4·1	4·1	4·2
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	66,71	68,55	76,93	(c) 96,11	1,11,13	19,62
From local funds	29,20*	30,30	29,06	16,44	16,43	22,30
From municipal funds	8,30†	8,64	6,76	4,06	4,69	4,25
Total Expenditure from public funds	1,04,41	1,07,49	1,12,75	1,16,61	(d) 1,32,25	(e) 1,45,81
From fees	50,91	54,70	58,28	59,57	61,15	64,43
From other sources	38,21	44,33	45,85	50,27	54,62	56,45
GRAND TOTAL OF EXPENDITURE	19,35,53	2,06,52	2,16,88	2,26,45	2,48,02	2,66,69

* Includes provincial contribution of Rs. 14,37,881. † Includes provincial contribution of Rs. 1,54,854.

(c) Includes Rs. 22,00,149 and Rs. 5,48,383 contributed to District Boards and Municipalities, respectively.

(d) Provincial subsidies to District Boards and Municipalities were Rs. 29,61,553 and Rs. 6,32,209 respectively.

(e) " " " " " Rs. 33,39,703 and Rs. 6,53,466 .

Professional and Technical Education.—There are eight medical colleges (in addition to a number of medical schools) with 3,446 students; twenty-one law colleges with 5,991 students; a number of agricultural colleges of which two only (Poona and Lyallpur) are affiliated to a university. A research institute in agriculture, was started by Lord Curzon at Pusa in Bihar, which has done valuable work. Conferences have recently been held at Pusa, Simla and Poona, with the object of providing a suitable training in agriculture. There are training colleges for secondary teachers in various parts of India, and normal schools for the training of vernacular teachers. In 1917, the Government of India made a recurring grant of 30 lakhs for the improvement of training facilities and for increased pay to teachers. Very little has been done to provide suitable instruction in commerce. The Sydenham College of Commerce in Bombay has recently been instituted for this purpose. Industrial institutions are dotted about India, some maintained by Government, others by municipalities or local boards, and others by private bodies. One of the most important is the Victoria Jubilee Technical Institute in Bombay. The tendency in recent years has been to place these institutions under the control of the Departments of Industries. In this connexion should be mentioned the Indian Institute of Science at Bangalore, the product of generous donations by the Tata family. In addition to a number of engineering schools, there are engineering colleges at Roorkee, Sibpur, Poona and Madras, each of which is affiliated to a university. There are schools of art in the larger towns, where not only architecture and the fine arts are studied, but also practical crafts like pottery and ironwork. There is also a school of forestry at Dehra Dun. Many inquiries have been made in the matter of technical education, by Colonel Atkinson, and Mr. Dawson, by the Public Works Committee and by the Industrial Commission, but as yet little progress has been made.

Universities.

There are 13 universities in India, namely:—

No.	University.	Dates of Acts.	Territorial jurisdiction.
1	CALCUTTA	1857, 1904 1905, & 1921.	Bengal and Assam and certain adjacent Indian States
2	MADRAS	1857, 1904 & 1905 ..	The Presidency of Madras and Coorg and certain Indian States.
3	BOMBAY .. .	1857, 1904 & 1905 ..	The Presidency of Bombay and cerain Indian States (Baroda, &c.)
4	PUNJAB	1882, 1904 & 1905 ..	The Punjab, the North West Frontier Province, Delhi, Baluchistan and adjacent Indian States (Kashmir, Patiala, &c.).
5	ALLAHABAD	1887, 1904 & 1905 ..	The United Provinces, the Central Provinces, Ajmere, Merwara and adjacent States
6	BENARES HINDU ..	Oct. 1915	Benares State.
7	MYSORE . ..	July 1916	Mysore State
8	PATNA	Sept. 1917	Bihar & Orissa and adjacent Indian States
9	DACCA	April 1920	Radius of 5 miles
10	ALIGARH MUSLIM ..	Sept 1920	Radius of 10 miles
11	RANGOON	Oct 1920	Burma.
12	LUCKNOW	Nov. 1920	Local
13	OSMANIAH	.. . .	Hyderabad State.
..	DELHI	Projected	Delhi.
..	NAGPUR	,, ...	The Central Provinces.

On the 27th March 1921 an amending Act was passed by which the Governor-General ceased to be the Chancellor of the Calcutta University and now the head of the provincial government is the Chancellor of each of the older universities. The Vice-Chancellor is nominated by the Government concerned. The executive body is the Syndicate which is now organised so as to include a larger educational element. Over this body the Vice-Chancellor presides, all other members being elected by the Faculties, except the Director of Public Instruction who is a member *ex officio*. The secretarial work is under the direction of the Registrar. The legislative body is the Senate which consists of from 75 to 100 members, 80 per cent. of whom are nominated by the Chancellor, the rest being elected by the Senate, or by its Faculties, or by the body of registered graduates. The Senate is divided into Faculties, which are in most cases those of arts, science, law, medicine, and engineering. There is an oriental faculty in the Punjab University alone. There are also Boards of Studies, whose duties are to recommend text-books or books which represent the standard of knowledge required in the various examinations. The newer universities differ considerably from the older universities in constitution.

Statement of Educational Progress in BOMBAY.

	1914–15.	1915–16.	1916–17.	1917–18	1918–19.	1919–20.
Area in square miles	123,070	No change.	123,065	No change.	No change.	No change.
Population (Male)	10,252,255		No change.			
Population (Female)	9,430,994					
Total Population	19,683,249					
Public Institutions for Males.						
Number of arts colleges	7	7	8	9	10	10
Number of high schools	110	111	122	126	133	140
Number of primary schools	9,929	9,797	9,645	9,951	10,647	11,252
Male Scholars in Public Institutions.						
In arts colleges	3,381	4,596	4,763	4,630	4,985	5,057
In high schools	37,600	37,615	40,154	41,884	46,075	49,189
In primary schools	551,987	545,461	528,294	522,962	557,669	602,157
Percentage of male scholars in public institutions to male population.	6·0	6·0	5·9	5·9	6·3	6·7
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	31	31	32	35	39	44
Number of primary schools	1,057	1,093	1,110	1,191	1,321	1,642
Female Scholars in Public Institutions.						
In arts colleges	94	106	125	128	134	140
In high schools	4,485	4,600	4,826	5,347	6,350	7,361
In primary schools	119,999	124,680	124,324	127,868	144,135	157,965
Percentage of female scholars in public institutions to female population.	1·3	1·4	1·4	1·5	1·7	1·8
TOTAL SCHOLARS in public institutions (Male)	620,864	619,789	604,701	602,405	641,743	691,582
TOTAL SCHOLARS in public institutions (Female)	129,738	134,833	134,684	138,899	155,663	170,301
TOTAL SCHOLARS in public institutions (Total)	750,602	754,622	739,385	741,304	797,406	861,883
TOTAL SCHOLARS (both male and female) in all institutions.	789,709	799,273	780,504	781,674	834,003	892,875
Percentage of total scholars to Population. (Males)	6·3	6·4	6·2	7·2	6·5	7·0
Percentage of total scholars to Population. (Females)	1·5	1·5	1·5	1·6	1·8	1·9
Percentage of total scholars to Population. (Total)	4·0	4·1	3·9	4·0	4·2	4·5
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	82,08	74,77	75,51	* 79,19	† 1,04,70	‡ 1,25,71
From local funds	9,34	12,17	8,87	8,52	8,83	10,03
From municipal funds	11,15	12,34	13,49	14,62	17,65	26,92
Total Expenditure from public funds	1,02,57	99,28	97,87	1,02,33	1,31,18	1,62,66
From fees	27,25	29,21	33,54	35,89	36,54	38,64
From other sources	24,05	25,62	24,48	26,15	27,46	33,60
GRAND TOTAL OF EXPENDITURE	1,53,87	1,54,11	1,55,89	1,64,37	1,95,18	2,34,90

* Includes Rs. 12,671 from Imperial Funds. † Includes Rs. 19,471 from Imperial Funds. ‡ Includes Rs. 16,847 from Imperial Funds.

Apart from the general tightening up of university control over its colleges, the chief feature of university development since the passing of the Act of 1904 has been the participation by the universities in post-graduate teaching and research. In Madras and Allahabad a small number of university professors have been appointed; in the Punjab the services of a certain number of temporary professors from overseas have been engaged during the cold weather. In Bombay a certain number of college professors and others have delivered lectures to post-graduate students under the auspices of the University. But the most notable advance has been made in Calcutta, owing to the energy of Sir Asutosh Mookerjee and to the liberality of Sir Tarak Nath Palit and of Sir Rash Behari Ghosh. In 1916, a committee was appointed to investigate the matter. In accordance with its report, new regulations have been passed by the Senate, whereby all post-graduate teaching and research in arts and science in Calcutta is now conducted directly by the University, though many of the college teachers have been invited to take part in the work. Post-graduate councils in arts and science have also been constituted, which comprise all the teachers engaged in the work and a very small number of additional members appointed by the Senate.

Patna University—Much thought has also been given to the evolution of a new type of university which will run abreast of the old., Patna University, which was constituted in 1917, is in most of its features a university of the old type, but certain innovations have been made. The Chancellor, who is the Lieutenant Governor of the province, may annul any proceeding of the University which is not in conformity with the Act and the Regulations. In the Senate the application of the elective principle has been extended, by increasing both the proportion of the elected Fellows and the categories of electing bodies, and the Senate includes representatives of the teaching staff and of the graduate teachers of recognised schools. Further, all colleges are given statutory representation on the Senate in the persons of their principals. The Syndicate is the ultimate authority in academic matters, subject to the proviso that any six of its members have the power to refer such matters to the Senate for review. The Vice-Chancellor is a paid officer and is appointed by the local Government. In addition to other duties, he has the power to inspect all colleges of the University. The colleges affiliated to the University are of two kinds; colleges of the University, whose buildings are situated within a specified area, and external colleges, whose buildings are situated in one of the four following towns: Muzuffarpur, Bhagalpur, Cuttack and Hazaribagh.

Mysore University was constituted under Regulation V of 1916, for the better encouragement and organisation of education in the State. His Highness the Maharaja is the Chancellor. The University is very similar in its constitution to the older Indian universities, having a Senate of not less than fifty and not more than sixty members; but, unlike the older Universities, it gives seats on the Senate to the university professors *ex officio*. It departs from existing practice by centralising university instruction in Mysore and Bangalore, and by conducting the work of the first year of the old colleges course in a few specially selected high schools.

Hindu University, Benares—The creation of the Hindu University, Benares, forms a landmark in the history of the Indian university system. The university is not designed to meet the needs of one province alone, but to draw students from all parts of India.

It has no monopoly, no privilege. Its energies are not diffused by the necessity of supervising distant colleges nor is its vitality impaired by the embarrassment of administrative duties other than those of organising its own teaching. It is therefore the first Indian university which is primarily a seat of learning and not an administrative organisation. Its constitution is therefore very different from those of the other Indian universities. A dividing line is made between administrative matters, entrusted to a large body called the Court, with an executive committee called the Council, and academic matters, entrusted primarily to a Senate, with an executive body called the Syndicate. The Court which is the supreme governing body besides its administrative powers, has the right to review the acts of the Senate, except where the Senate has acted in accordance with the Act, statutes and regulations. The Senate has the entire charge of the organisation of instruction in the University and the colleges, the courses of study, and the examination and discipline of students and the conferment of ordinary and honorary degrees.

The University of Dacca.—With the modification of the Partition of Bengal in 1911, Dacca ceased to be the capital of the Separate province of Eastern Bengal and Assam. Shortly afterwards, the Government of India conveyed their decision to establish a university of Dacca in their letter to the Government of Bengal, dated the 4th April 1912, and the latter Government appointed a committee to frame a scheme for the new University. The committee was instructed that the University should be of the teaching and residential and not of the federal type, and that it should be a self-contained organism unconnected with any colleges outside the limits of the city of Dacca. The Committee, which was presided over by the late Mr. R Nathan, presented its report later in the year. The report is of great value and in it certain new principles are enunciated. Great emphasis was attached to physical training and education and also to the tutorial guidance of the students. The University was to be very largely a State institution, and practically all its teachers and those of its colleges were to be Government servants. Though the colleges were to be separate units, each with its separate staff and buildings, they were to be linked together and with the University by a close form of co-operation. The executive body, to be called the Council, was to have very considerable powers, subject to the sanction of Government. The Council, which was to be a large and representative body, was to be the legislative authority, subject to the control of

Statement of Educational Progress in BENGAL.

	1914–15.	1915–16	1916–17.	1917–18.	1918–19	1919–20.
Area in square miles	76,500					
Population .. .. { Male	23,067,225	No change.	No change	No change.	No large	No change.
{ Female	22,417,852					
Total Population ..	45,485,077		..	..		
Public Institutions for Males.						
Number of arts colleges	31	29	30	31	33	33
Number of high schools	599	627	707	741	822	878
Number of primary schools	28,365	31,617	32,595	34,079	34,278	4,864
Male Scholars in Public Institutions.						
In arts colleges	15,808	17,190	18,333	20,313	21,614	21,979
In high schools	192,032	200,382	220,879	227,057	235,633	256,479
In primary schools	949,112	1,067,782	1,099,651	1,120,582	1,089,897	1,007,609
Percentage of male scholars in public institutions to male population.	6·3	6·4	6·7	6·8	6·6	6·7
Public Institutions for Females.						
Number of arts colleges	3	3	3	3	3	3
Number of high schools	28	26	26	26	25	25
Number of primary schools	7,627	8,793	9,371	10,032	10,647	11,376
Female Scholars in Public Institutions.						
In arts colleges	113	126	145	166	166	178
In high schools	3,764	3,691	3,665	4,070	4,161	4,472
In primary schools	225,130	259,640	275,240	288,734	297,504	312,205
Percentage of female scholars in public institutions to female population.	1·1	1·2	1·3	1·4	1·4	1·5
TOTAL SCHOLARS in public institutions { Male ..	1,483,843	1,504,648	1,565,712	1,588,956	1,550,109	1,558,086
{ Female	253,124	273,850	289,800	303,995	312,217	328,513
Total ..	1,736,967	1,778,498	1,855,512	1,892,951	1,862,326	1,886,599
TOTAL SCHOLARS (both male and female) in all institutions.	1,799,889	1,844,541	1,918,432	1,965,273	1,931,535	1,953,969
Percentage of total scholars to population. { Male .	6·6	6·7	6·9	7·1	6·9	6·9
{ Female	1·2	1·3	1·4	1·4	1·5	1·5
Total ..	3·9	4·0	4·2	4·3	4·2	4·3
Expenditure (in thousands of rupees)	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	87,03	78,99	66,66	82,47	86,27	1,00 05
From local funds	24,34	22,79	22,26	12,50	13,36	13,39
From municipal funds	1,68	1,71	2,07	1,87	1,95	2,06
Total Expenditure from public funds	1,13,05	1,03,49	90,99	96,84	1,01,58	1,15,50
From fees	1,04,77	1,10,43	1,04,40	1,13,96	1,26,65	1,31,59
From other sources	36,52	42,86	42,73	44,14	49,35	54,84
GRAND TOTAL OF EXPENDITURE	2,54,34	2,56,78	2,43,12	2,54,94	2,77,58	3,01,53

Government, and in other respects an advisory authority. The total cost of the full scheme was estimated at 53 lakhs, but deducting certain sums which were available from other sources the net cost was put down at nearly 40 lakhs, exclusive of recurring charges. These were expected to involve a net total of about 6½ lakhs annually. Before the scheme thus elaborated (which had received the Secretary of State's sanction) could be taken in hand, the war broke out. The Act constituting the University was passed in April 1920 and Mr. P. J. Hartog, C.I.E., was appointed the first Vice-Chancellor.

The Aligarh Muslim University.—It was the aim of Sir Syed Ahmed Khan years ago to place the benefits of a liberal education within the reach of the Muhammadan community; and in 1875 a school was opened which three years later was converted into the Aligarh College. The movement in favour of transforming this college into a teaching and residential university started as early as the end of last century. In 1911, during the visit of His Majesty the King-Emperor to India, His Highness the Aga Khan made an appeal which resulted in the collection of some thirty lakhs of rupees. A draft constitution was drawn up and a consultative committee was formed. But the draft constitution was not approved by the Secretary of State, and on the question of the right of affiliating colleges outside Aligarh in particular, there was a sharp difference of opinion. Government laid down, as in the case of the proposed Hindu University, that the new university should not have the power of affiliating Moslem institutions in other parts of India.

On October 15th, 1915, a meeting of the Moslem University association was held at Aligarh, under the presidency of the Raja of Mahmudabad, when it was proposed that the meeting recommends the Moslem University Foundation Committee the acceptance of the Moslem University on the lines of the Hindu University. It was evident at the meeting that a large number of Indian Moslems are not prepared to accept a constitution for their university similar to that of the Hindu University.

In April, 1917, at a meeting of the Foundation Committee the following resolution was passed:—

"That this meeting of the Moslem University Foundation Committee hereby resolves with reference to the letter of the Government of India, Education Department, dated Delhi, 17th February 1917, D. O. No. 66, that the Committee is prepared to accept the best University on the lines of the Hindu University. It further authorises the Regulation Committee appointed at its Lucknow meeting, with the President and Honorary Secretary of the Moslem University Association as its ex-officio members, to take necessary steps in consultation with the Hon. the Education Member for the introduction of the Moslem University Bill in the Imperial Legislative Council."

The bill referred to above was ultimately introduced into the Council and was passed in September 1920. The act came into force on December 1st, 1920, and the Hon'ble Raja Sir Muhammad Ali Muhammad Khan, K.C.I.E. Khan Bahadur, of Mahmudabad, was appointed the first Vice-Chancellor of the University.

The University of Rangoon.—Plans for a university in Burma have been under consideration for some years. After his arrival in Burma as Lieutenant Governor Sir Harcourt Butler thought that, on general grounds and with some reference to the needs of the province, the Rangoon University might usefully be of a more practical type than any yet attempted in India with courses in arts and science, pure and applied, technology, medicine, engineering, agriculture, law, forestry, veterinary, science and training, commerce and architecture. It might perhaps combine with university instruction practical studies at the Chief Court, the Pasteur Institute and the hospitals; and also at the Museum which the local Government was committed to build as soon as funds were available. It is possible in Burma to a greater extent than in any of the older and more advanced provinces in India to concentrate the intellectual energies of the province in one immediate neighbourhood and to develop a really many-sided university. An Act to establish a teaching and residential college at Rangoon was passed on the 24th October 1920. The University authorities are the Chancellor, Vice-Chancellor, the Council (with an executive committee) and the Senate. The Council is the supreme administrative body while the Senate is an academic body with entire control of studies, examination and discipline. The Governor-General, as Visitor, has the right to cause inspection to be made.

The Lucknow University.—An Act was passed on the 25th November 1920 to establish a unitary teaching and residential University at Lucknow. The University authorities are (1) the Court, with powers of making statutes, (2) the Executive Council, which administers the property of the University and appoints examiners, (3) the Academic Council, which controls the teaching and advises the Executive Council on all academic matters, (4) a Committee of Reference (a Sub-Committee of the Court) deals with items of new expenditure only. The Governor-General, as Visitor, has the same power as in the case of the Rangoon University.

Proposed Universities.—Universities at Delhi and at Nagpur are projected, and it is expected that the Delhi University will be incorporated in 1922.

Education of Women and Girls.—Hitherto little attention has been paid to this important branch of education, as in many places social restrictions are still strong. In Madras and Calcutta there are two colleges each for girls: and there are in India a number of schools for girls maintained by Government or by private agency. In 1919-20, there were 1,024 female students in arts colleges and 33,247 in high schools. Arts colleges, medical colleges, and the like admit students of both sexes, and a few girls attend them. The Lady Hardinge Medical College for Women at Delhi, which has just been started, gives a full medical course for medical students.

Statement of Educational Progress in BIHAR and ORISSA.

	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Area in square miles	83,233	No change.	No change.	83,282 No change.	No change.	No change.
Population .. { Male ..	16,859,929					
{ Female ..	17,630,155					
TOTAL POPULATION ..	34,490,084					
Public Institutions for Males.						
Number of arts colleges ..	7	7	7	7	7	8
Number of high schools ..	91	94	100	106	114	120
Number of primary schools ..	21,339	21,233	22,164	23,268	23,052	23,120
Male Scholars in Public Institutions.						
In arts colleges	2,227	2,415	2,575	2,811	2,914	2,591
In high schools	30,887	32,391	34,733	35,200	35,917	33,061
In primary schools	557,041	547,721	574,520	606,421	589,419	604,339
Percentage of male scholars in public institutions to male population	4·0	4·0	4·1	4·1	4·0	4·1
Public Institutions for Females.						
Number of arts colleges ..	....	....	....	....	....	....
Number of high schools ..	3	3	3	3	4	4
Number of primary schools ..	2,069	2,169	2,249	2,559	2,600	2,673
Female Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	337	326	331	343	722	675
In primary schools	93,385	95,396	97,813	105,294	105,837	110,107
Percentage of female scholars in public institutions to female population	·63	·65	·62	·62	·62	·65
TOTAL SCHOLARS in public institutions. { Males ..	678,715	674,490	688,190	696,510	679,614	697,279
{ Females	111,714	114,674	109,281	108,702	109,482	113,755
TOTAL ..	790,429	789,164	797,471	805,212	789,096	811,031
TOTAL SCHOLARS (both male and female) in all institutions ..	836,209	831,430	845,025	852,324	827,140	846,502
Percentage of total scholars to population .. .. { Males ..	4·2	4·2	4·3	4·4	4·2	4·3
{ Females.	65	·66	·63	·63	·63	·66
TOTAL ..	2·4	2·4	2·4	2·47	2·4	2·4
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues ..	36,72	31,41	29,58	28,81	31,12	38,16
From local funds	14,13	15,57	15,75	15,49	(*a*) 17,97	(*c*) 19,35
From municipal funds	1,08	1,28	1,73	1,46	(*b*) 1,67	(*d*) 1,63
TOTAL Expenditure from public funds	51,93	48,26	47,04	45,76	50,76	59,17
From fees	21,12	22,67	22,37	23,04	24,33	25,28
From other sources	12,74	13,63	12,11	12,10	13,92	15,11
GRAND TOTAL OF EXPENDITURE	85,79	84,56	81,52	80,90	89,01	99,56

(*a*) Includes Rs. 11,54,625 from Provincial revenues.
(*b*) Includes Rs. 1,00,829 from Provincial revenues.
(*c*) Includes Rs. 12,41,158 and (*d*) includes Rs. 81,335 from Provincial revenues

Administration.—The educational services are divided into (*a*) the Indian Educational Service, (*b*) the Provincial Educational Service, (*c*) the Subordinate Educational Service

(*a*) **The Indian Educational Service** comprises officers in three branches, inspectors, principals and professors of colleges, headmasters of high schools, all of whom are appointed by the Secretary of State. All, with a few exceptions, start at the pay of Rs. 500 *per mensem*, with an annual increment of Rs. 50 *per mensem*, and go up to Rs. 1,000 *per mensem*, directors of public instruction receiving from Rs. 1,500 to Rs. 2,500 according to the province in which they serve. A small number of personal allowances was arranged in 1896, when the service was reorganised and received its title. There is no short service pension, but officers of 30 years' service or of 55 years of age or over receive a pension of about £400 a year.

(*b*) **The Provincial Educational Service.**—In this service also are found principals and professors of colleges, headmasters and inspectors of schools. This service is composed of Indians and is recruited in India, the pay scheme being on a much lower scale than that of the Indian service. The maximum pay is Rs. 700 and the minimum Rs. 200.

(*c*) **The Subordinate Educational Service.**—In this service are found a few headmasters,college professors assistant inspectors and assistant masters in schools. In Bengal a number of poorly paid teachers have been converted into a lower subordinate service. The pay and prospects of this service are very poor.

Recently the pay of all the educational services has been improved The Indian Educational Service scale is Rs. 400 to Rs 1,250 by annual increments of Rs. 50 and an 'overseas' allowance ranging from Rs. 150 to Rs 250 is given to those whose domicile is not India The pay of Directors of Public Instruction has also been improved The scales of the other services have also been revised but they still differ in the several provinces

In 1910 a **Department of Education** was established in the Government of India with an office of its own and a Member to represent it in the Executive Council. The first Member was Sir Harcourt Butler: and the present Member is Sir. Mian Muhamad Shafi At the same time the Bureau of Education was re-established and placed under the charge of an officer styled the Educational Commissioner. The Educational Commissioner is not an executive officer of the Department But he is kept in touch with all its proceedings; he gives advice: and he collects and correlates information in regard to the progress of education in India and elsewhere.

Board of Education.—In 1920 a Central Advisory Board of Education was constituted The present members of the Board are Mr P. J Hartog, Vice-Chancellor of the Dacca University; Mr C. F. de la Fosse; the Right Hon Mr S. Sastri of Madras; Mr. Patwardhan, Principal of the Fergusson College, Poona; The Hon'ble Mian Fazl Hussain; Mr. A. J. Mayhew; Dr. Zia-ud-Din Ahmad; Mr. G. Anderson and the Hon'ble Mr. J. A. Richey (President) The functions of the Board are purely advisory and it meets once a quarter.

Calcutta University Commission.—The Report of the Calcutta University Commission was published in August 1919 and in the following January the Government of India issued a Resolution summarising the main features of the Report and the recommendations of the Commissioners.

The Government of India drew special attention to the following points in the Report:—

(*i*) High schools fail to give that breadth of training which the developments of the country and new avenues of employment demand

(*ii*) The intermediate section of University education should be recognized as part of school education and should be separated from the University organisation

(*iii*) The defects of the present system of affiliated colleges may be mitigated by the establishment of a strong central teaching body, the incorporation of unitary universities (as occasion arises), a modification of the administrative machinery which will admit of fuller representation of local interests, and supervision of different classes of institutions by several appropriately constituted bodies.

The Commission gave detailed suggestions for the reorganisation of the Calcutta University, for the control of secondary and intermediate education in Bengal and for the establishment of a unitary teaching University in Dacca. These measures concerned only Bengal: but it was generally recognised that some of the criticisms made by the Commissioners admit of a wider application Committees were consequently appointed by the Universities of Madras, Bombay, Patna and the Punjab to consider the findings of the Commission. In the United Provinces two committees were appointed, one to prepare a scheme for a unitary teaching University at Lucknow, the second to consider measures for the reorganisation of the Allahabad University and the creation of a Board to control secondary and intermediate education

In Bengal the first outcome of the Commission's Report was the passing of the Dacca University Act in the Imperial Legislative Council in March 1920 "But," writes the Director "the outcome of the Commission's report, as far as it affects the general University and secondary education system of the Presidency, is still, in spite of the Government of India resolution, a mere matter for speculation."

The Reforms Act The Reforms Act of 1919 has altered the conditions of educational administration in India. Education is now a 'transferred' subject, and is, in each Province, under the charge of a 'Minister' There are, however, some exceptions to this new order of things The education of Europeans is a 'Provincial reserved' subject, *i. e*, it is not within the charge of the Minister of Education; and to the Government of India are still reserved matters relating to the non-Provincial Universities like Aligarh and Benares and all new universities, and university legislation generally.

Statement of Educational Progress in the UNITED PROVINCES.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	106,402	No change.	No change	No change.	No change.	No change.
Population Male	24,469,373					
Female	22,365,735					
Total Population	46,835,108					
Public Institutions for Males.						
Number of arts colleges	36	35	15	15	15	16
Number of high schools	126	132	143	151	155	164
Number of primary schools	10,545	10,476	10,540	10,862	11,507	13,602
Male Scholars in Public Institutions.						
In arts colleges	5,784	6,195	5,130	5,379	4,993	5,728
In high schools	39,558	41,243	44,976	46,374	45,190	45,536
In primary schools	564,200	579,658	633,869	650,829	661,904	730,049
Percentage of male scholars in public institutions to male population.	2·8	2·8	3·0	3·1	3·2	3·5
Public Institutions for Females.						
Number of arts colleges	4	4	4	4	4	4
Number of high schools	21	22	23	25	24	27
Number of primary schools	1,084	1,064	1,089	1,120	1,146	1,228
Female Scholars in Public Institutions.						
In arts colleges	66	70	52	55	53	59
In high schools	2,080	2,227	2,340	2,716	2,704	2,993
In primary schools	47,916	48,884	51,944	55,720	63,558	71,510
Percentage of female scholars in public institutions to female population.	·25	·27	·28	·30	·34	·38
TOTAL SCHOLARS in public institutions. Male	683,121	694,986	742,134	764,391	772,228	845,955
Female	57,552	58,902	63,286	67,542	75,821	85,614
Total	740,673	753,888	805,420	831,933	848,049	931,569
TOTAL SCHOLARS (both male and female) in all institutions.	832,454	841,334	894,886	918,258	924,679	1,005,600
Percentage of total scholars to population. Male	3·1	3·2	3·4	3·5	3·4	3·7
Female	·28	·29	·32	·33	·37	·41
Total	1·8	1·8	1·9	2·0	2·0	2·1
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	54,60	46,61	47,96	56,52	56,90	75,85
From local funds	32,34	37,14	38,60	32,08	33,38	44,15
From municipal funds	5,05	4,60	5,47	5,24	5,72	6,46
Total Expenditure from public funds	91,99	88,35	92,03	93,84	96,00	1,26,46
From fees	27,50	28,86	31,14	34,40	36,54	38,36
From other sources	22,07	21,98	24,29	24,65	39,83	63,78
GRAND TOTAL OF EXPENDITURE	1,41,56	1,39,19	1,47,46	1,52,89	1,72,37	2,28,60

Statement of Educational Progress in the PUNJAB.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	96,865	99,251	99,251	No change.	No change.	No change
Population (Male)	10,770,707	10,770,705	10,769,704			
Population (Female)	8,807,252	8,807,254	8,806,943			
Total Population	19,577,959	19,577,959	19,576,647			
Public Institutions for males.						
Number of arts colleges	9	9	10	11	12	12
Number of high schools	125	130	136	143	157	172
Number of primary schools	4,552	4 757	4,918	5,084	5,172	5,162
Male Scholars in Public Institutions.						
In arts colleges	3,496	3,875	4,214	4,593	4,540	4,566
In high schools	50,521	51,261	54,268	55,379	59,261	65,502
In primary schools	227,890	234,192	244,796	242,335	245,786	228,404
Percentage of male scholars in public institutions to male population.	3·1	3·2	·54	3·4	3·5	3·7
Public Institutions for Females.						
Number of arts colleges	1	1	1	1	1	1
Number of high schools	17	18	17	18	18	20
Number of primary schools	878	922	935	954	951	1,001
Female Scholars in Public Institutions.						
In arts colleges	18	20	22	28	30	38
In high schools	241	2,453	2,449	2,586	2,802	3 150
In primary schools	38,757	41,169	43,055	43,254	43,904	45 855
Percentage of female scholars in public institutions to female population.	·54	·58	·62	·62	·65	·69
TOTAL SCHOLARS in public institutions (Male)	338,917	359,675	366,142	364,516	373,348	403,600
TOTAL SCHOLARS in public institutions (Female)	47,832	52,278	54,901	55 528	58,280	60,672
Total	386 749	402,953	421,043	420,044	431,628	464,272
TOTAL SCHOLARS (both male and female) in all institutions.	445,905	463,157	476,738	468,839	477,200	517,989
Percentage of total scholars to population. (Males)	3·5	3·6	3·8	3·7	3·8	4·1
Percentage of total scholars to population. (Females)	·73	·78	·79	·77	·78	·82
Total	2·3	2·4	2·4	2·4	2·4	2·6
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	34,17	35,93	31,00	§ 50,13	56,69	¶ 64,13
From local funds	† 24,39	27 87	25,40	12,54	13,51	17,28
From Municipal Funds	‡ 5,26	6,00	6,43	4,08	5,40	6,94
Total Expenditure from public funds	63,82	68 90	62,92	66,75	75,60	88,35
From fees	23 82	25 30	27,36	29,51	29,06	31,19
From other sources	19,55	17,88	1,86,35	18,47	19,36	22,40
GRAND TOTAL OF EXPENDITURE	1,07,19	1,12 17	1,08,63	1,14,73	1,24,02	1,41,94

† Includes an Imperial contribution of Rs. 9,69,296 and Provincial contribution of Rs. 2,32,592.
‡ Includes an Imperial contribution of Rs 1,65,810 and Provincial contribution of Rs. 14,543.
§ Includes Rs. 14,90,330 from Imperial Funds. Includes Rs. 19,58,072 from Imperial Funds.
¶ Includes Rs 29,13 966 from Imperial Funds.

Statement of Imperial Grants.

(In lakhs of Rupees).

PROVINCE	GRANTS.		EXPENDITURE.						Unspent Balance.	
	To end of 1919-20		To end of 1918-19		In 1919-20.		Total to end of 1919-20		At end of 1919-20.	
	Recurring.	Non-recurring.	Recurring.	Non-recurring.	Recurring.	Non-recurring.	Recurring.	Non-recurring.	Recurring.	Non-recurring.
Madras	161·34	65 21	132 42	55·14	28 68	2·17	161·10	57 31	·24	7·90
Bombay	125·62	57·81	74·43	44 31	17 36	1·57	91 79	45·88	33·83	11·93
Bengal	239·92	150 34	136 32	83 78	33 31	5·09	169·63	88 87	70·29	61·47
United Provinces	135·27	69 53	112·30	50 16	22 97	19·43	135·27	69·59	..	..
Punjab	78·81	40 86	63·33	39·39	13 01	..	76 24	39·39	2·47	1·47
Burma	62·69	33·75	41 63	25·35	10·93	·13	52·56	25·48	10·13	8·27
Bihar and Orissa	101·24	41·69	68 71	26·72	18·66	2 60	87·37	29·32	13·87	12·37
Central Provinces and Berar	53·23	23 40	43 93	20·12	9 30	·17	53 23	20·29	..	2·11
Assam	34·37	15 70	25 08	15·70	3 18	..	28·26	15·70	6·11	..
North-West Frontier Province	18·69	6·07	15·18	6 07	3·21	..	18·39	6·07	·30	..
Other Administrations	24·53	19·73	18·36	18 21	4 14	·84	22·50	19·05	2·03	·68
TOTAL ..	1,035·71	524 15	729·69	384·95	166·75	32·00	896·44	416·95	139·27	107·20

Statement of Educational Progress in BURMA

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20
Area in square miles	230,839	No change.	No change.	No change.	No change.	No change.
Population .. { Male	6,183,494					
Population .. { Female	5,931,723					
Total Population ..	12,115,217					
Public Institutions for Males.						
Number of arts colleges	2	2	2	2	2	2
Number of high schools *	56	65	68	76	85	86
Number of primary schools	6,029	6,492	6,788	6,681	6,353	5,602
Male Scholars in Public Institutions.						
In arts colleges	565	633	645	658	708	733
In high schools	15,923	17,265	17,688	18,988	20,401	21,638
In primary schools	161,921	167,563	172,547	166,819	159,994	150,203
Percentage of male scholars in public institutions to male population.	4·1	4·2	4·4	4·3	4·2	4·2
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	14	14	15	18	16	17
Number of primary schools	740	855	937	933	963	824
Female Scholars in Public Institutions.						
In arts colleges	9	12	18	27	39	48
In high schools	2,918	3,257	3,633	4,238	4,536	5,079
In primary schools	77,273	79,767	84,182	81,050	79,773	76,107
Percentage of female scholars in public institutions to female population.	1·8	1·9	2·0	2·0	2·0	·9
TOTAL SCHOLARS in public institutions. { Male ..	252,623	263,704	273,192	266,609	260,677	256,879
TOTAL SCHOLARS in public institutions. { Female	108,531	113,301	120,207	116,613	116,514	115,682
Total ..	361,154	377,005	393,399	383,312	377,191	372,561
TOTAL SCHOLARS (both male and female) in all institutions	550,154	563,154	592,523	584,298	572,908	575,206
Percentage of total scholars to population { Male ..	7·1	7·2	7·5	7·4	7·3	7·3
Percentage of total scholars to population { Female ..	1·9	1·9	2·1	2·0	2·0	2·0
Total .	4·5	4·6	4·9	4·8	4·7	4·7
Expenditure (in thousands of rupees)	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	29,70	27,05	27,68	39,60	32,08	32,87
From local funds	(a) 6,92	6,40	(c) 6,17	(e) 7,00	10,48	10,82
From municipal funds	(b) 4,67	4,78	(d) 4,50	(f) 2,65	3,56	3,72
Total Expenditure from public funds ..	41,29	38,23	38,35	49,25	46,12	47,41
From fees	19,80	20,32	21,00	21,23	23,56	22,37
From other sources	8,26	6,59	7,44	7,02	7,42	11,59
GRAND TOTAL OF EXPENDITURE ..	69,35	65,14	66,79	77,50	77,10	81,37

* Include also vernacular high schools.

(a) Includes Rs. 88,072, being provincial contribution to District Cess Funds.

(b) Includes Rs. 43,547, being provincial contribution to Municipalities.

(c) Includes Rs. 40,863, being provincial contribution to District Cess Funds for educational purposes.

(d) Includes Rs. 38,104 being provincial contribution to Municipal Funds for educational purposes.

(e) Includes Rs. 2,375 from provincial Funds.

(f) Includes Rs. 34,758 from provincial Funds.

Statement of Educational Progress in ASSAM.

	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Area in square miles	53,015					
Population .. Male	3,467,621	No change.	No change	No change.	No change.	No change.
Population .. Female ..	3,246,014					
TOTAL POPULATION ..	6,713,635					
Public Institutions for Males.						
Number of arts colleges ..	2	2	2	2	2	2
Number of high schools ..	30	32	36	36	37	38
Number of primary schools ..	3,926	3,859	3,868	3,881	3,924	4,030
Male Scholars in Public Institutions.						
In arts colleges	550	592	687	810	884	940
In high schools	12,223	12,182	13,542	13,559	13,273	13,499
In primary schools	162,291	161,612	157,046	153,853	149,546	154,597
Percentage of male scholars in public Institutions to male population	5·7	5·7	5·7	5·6	5·5	5·6
Public Institutions for Females.						
Number of arts colleges ..	....	..	....	....	....	....
Number of high schools ..	2	2	2	2	2	3
Number of primary schools ..	345	333	329	331	347	374
Female Scholars in Public Institutions.						
In arts colleges	1	1	1	1	1	....
In high schools	434	418	428	386	459	620
In primary schools	24,587	24,730	24,762	23,868	23,052	25,082
Percentage of female scholars in public institutions to female population	·82	·84	·85	·82	·81	·88
TOTAL SCHOLARS in public institutions Male ..	199,891	199,524	197,096	194,548	189,181	195,756
TOTAL SCHOLARS in public institutions Female .	26,761	27,321	27,723	26,921	26,267	28,618
TOTAL ..	226,652	226,845	224,819	221,469	215,448	224,374
TOTAL SCHOLARS (both male and female) in all institutions.	233,883	237,485	233,913	230,085	224,715	233,106
Percentage of total scholars to populations. Male ..	5·9	6 0	5·9	5·8	5·7	5·9
Percentage of total scholars to populations. Female .	·85	·87	·8	·86	·86	·92
TOTAL ..	3·5	3·5	3·5	3·4	3·3	3·5
Expenditure (in thousands of rupees).	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues ..	12,33	12,28	9,97	13,82	14,23	16,4
From local funds	7,81	7,26	7,33	3,96	3,99	4,14
From municipal funds	44	43	33	24	24	26
TOTAL Expenditure from public funds	20,58	19,97	17,63	18,02	18,46	20,89
From fees	3,75	4,39	4,65	5,24	5,76	6,20
From other sources	2,21	2,52	3,31	2,56	2,61	3,25
GRAND TOTAL OF EXPENDITURE	26,54	26,88	25,59	25,82	26,83	30,34

Statement of Educational Progress in the CENTRAL PROVINCES and BERAR.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	99,823	No change.	No change.	99,623 No change.	No change.	No change.
Population—Male	6,930,392					
Population—Female	6,985,916					
Total Population	13,916,308					
Public Institutions for Males.						
Number of arts colleges	4	4	4	4	4	4
Number of high schools	42	43	43	43	44	43
Number of primary schools	3,727	3,699	3,698	3,799	3,841	3,867
Male Scholars in Public Institutions.						
In arts colleges	1,013	1,081	1,093	1,126	937	957
In high schools	4,099	4,630	4,924	5,211	4,583	3,898
In primary schools	257,980	256,187	253 950	253,135	241,800	240,641
Percentage of male scholars in public institutions to male population.	4·5	4·5	4·5	4·5	4·4	4·4
Public Institutions for Females.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	7	7	7	7	7	9
Number of primary schools	318	323	316	310	324	326
Female Scholars in Public Institutions.						
In arts colleges	1	....	1	1	1	....
In high schools	46	59	58	69	81	113
In primary schools	31,533	32,504	33,516	33,635	33,913	34,435
Percentage of female scholars in public institutions to female population.	·49	·51	·53	·54	·55	·56
TOTAL SCHOLARS in public institutions.—Males	312,755	312,308	312,322	313,612	308,796	307,919
TOTAL SCHOLARS in public institutions.—Females	34,388	35,394	36,739	37,856	38,951	39,790
TOTAL SCHOLARS in public institutions.—Total	347,143	347,702	349,061	351,468	347,747	347,709
TOTAL SCHOLARS (both male and female) in all institutions.	347,666	350,381	351,165	353,444	349,743	349,771
Percentage of total scholars to population.—Males	4·5	4·5	4 5	4·6	4·5	4·5
Percentage of total scholars to population.—Females	·49	·52	·53	·55	·56	·57
Percentage of total scholars to population.—Total	2·5	2 5	2 5	2 5	2·5	2·6
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	14,03	15,28	15,96	30,24	34,16	39,43
From local funds	15,42	17,56	16,54	6,46	8,02	10,84
From municipal funds	4,27	5,37	5,58	4,59	4,33	4,91
Total Expenditure from public funds	33,72	38,21	38,08	41.29	46.51	55,18
From fees	4,72	5,39	5,73	6,31	6,67	6,43
From other sources	5,61	4,25	5,15	5.24	5,52	6,27
GRAND TOTAL OF EXPENDITURE	44,05	47,85	48.96	52.84	58,70	67,88

Statement of Educational Progress in the NORTH-WEST FRONTIER PROVINCE.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	13,193					
Population { Male	1,182,102					
Population { Female	1,014,831	No change.	No change.	No change.	No change	No change.
Total Population	2,196,933					
Public Institutions for Males.						
Number of arts colleges	2	2	2	2	2	2
Number of high schools	14	16	17	17	17	18
Number of primary schools	539	584	585	582	618	615
Male Scholars in Public Institutions						
In arts colleges	148	146	177	188	179	200
In high schools	4,905	5,418	5,469	5,522	5,672	5,957
In primary schools	25,601	26,328	25,060	24,848	25,392	23,578
Percentage of male scholars in public institutions to male population.	3·1	3·2	3·2	3·2	3·3	3·2
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	..	..	..	..	..	..
Number of primary schools	38	40	42	44	47	4
Female Scholars in Public Institutions.						
In arts colleges	..	..	..	..	..	..
In high schools	..	..	..	..	..	..
In primary schools	..	..	..	..	..	..
Percentage of female scholars in public institutions to female population.	2,850 ·32	2,918 ·34	2,521 ·32	2,654 ·32	3,051 36	3,185 ..
TOTAL SCHOLARS in public institutions. { Male	37,151	38,778	37,946	37,862	38,988	37,439
TOTAL SCHOLARS in public institutions. { Female	3,280	3,509	3,287	3,363	3,649	3,878
Total	40,431	42,287	41,233	41,225	42,637	41,317
TOTAL SCHOLARS (both male and female) in all institutions.	47,744	49,512	46,285	46,134	48,360	44,615
Percentage of total scholars to population { Males	3·6	3·7	3·5	3·5	3·7	3·4
Percentage of total scholars to population { Females.	·48	·51	·44	·43	·48	·5
Total	2·2	2·2	2·1	2·1	2·2	2·0
Expenditure (in thousands of rupees).	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	2,80	2·86	2,89	(*d*) 5,70	(*d*) 6,18	7,93
From local funds	2,39	2,72	(*c*) 2,82	84	63	1,00
From municipal funds	84	69	(*c*) 1,99	70	77	83
Total Expenditure from public funds	(*b*) 6,03	6.27	7,70	7,24	7,58	9,76
From fees	93	1.04	1,14	1,21	1,12	1,11
From other sources	2,69	2,12	1,47	1,10	1,03	1,55
GRAND TOTAL OF EXPENDITURE	9,65	9,43	10,31	9,55	9,73	12,42

(*b*) Includes contributions from Imperial and Provincial Funds.
(*c*) Includes Rs. 1,25,000 transferred by the Municipal Committee, Peshawar, to Government for the building of the Government Training College, Peshawar.
(*d*) Includes an expenditure of Rs. 50,000 from Imperial Funds.

Statement of Educational Progress in COORG.

	1914–15.	1915–16.	1916–17.	1917–18.	1918–19.	1919–20.
Area in square miles	1,582					
Population .. Male	97,279	No change.	No change.	No change.	No change.	No change.
Population .. Female	77,697					
TOTAL POPULATION ..	174,976					
Public Institutions for Males.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	1	1	2	2	2	2
Number of primary schools	94	91	92	93	93	93
Male Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	249	290	529	605	684	683
In primary schools	5,118	4,797	4,919	4,950	4,963	5,047
Percentage of male scholars in public institutions to male population.	5·7	5·4	5·6	5·7	5·8	5·9
Public Institutions for Females.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	....	....	....	....	....	....
Number of primary schools	7	7	7	8	9	10
Female Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In nigh schools	....	....	....	....	....	....
In primary schools	2,247	2,259	2,164	2,164	2,232	2,264
Percentage of female scholars in public institutions to female population.	3·0	3·0	2·9	2·9	3·01	3·0
TOTAL SCHOLARS in public institutions. Male ..	5,577	5,314	5,478	5,583	5,687	5,773
TOTAL SCHOLARS in public institutions. Female.	2,360	2,365	2,267	2,258	2,341	2,357
Total ..	7,937	7,679	7,745	7,841	8,028	8,130
TOTAL SCHOLARS (both male and female) in all institutions.	8,301	7,985	7,978	7,998	8,194	8,244
Expenditure (in thousands of rupees).						
From provincial revenues	63	63	60	65	71	73
From local funds	18	17	13	13	15	17
From municipal funds	2	7	2	1	1	2
Total Expenditure from public funds	83	87	75	79	87	92
From fees	16	16	17	19	20	19
From other sources	5	7	9	10	9	10
GRAND TOTAL OF EXPENDITURE ..	1,04	1,10	1,01	1,08	1,16	1.21

Statement of Educational Progress in DELHI.

	1915-16.	1916-17	1917-18	1918-19.	1919-20.
Area in square miles	574½	573	No change.	No change	No change.
Population .. Male	229,342	230,345			
Population .. Female	182,207	182,476			
TOTAL POPULATION ..	411,549	412,821	..	..	
Public Institutions for Males.					
Number of arts colleges	2	2	3	3	3
Number of high schools	6	7	7	7	7
Number of primary schools	87	96	106	120	124
Male Scholars in Public Institutions					
In arts colleges	309	364	436	485	548
In high schools	2,011	2,004	2,028	2,056	1,925
In primary schools	5,365	6,064	6,003	5,796	4,616
Percentage of male scholars in public institutions to female population ..	3·8	4·1	4·3	4·4	4·6
Public Institutions for Females.					
Number of arts colleges	..	..	..	..	..
Number of high schools	..	..	2	2	2
Number of primary schools	13	14	16	19	22
Female Scholars in Public Institutions.					
In arts colleges	..	..	..	..	..
In high schools	..	..	94	243	246
In primary schools	701	588	664	798	877
Percentage of female scholars in public institutions to female population ..	1·0	1·0	1·01	1·1	1·1
TOTAL SCHOLARS in public institutions .. .. Male ..	8,640	9,537	10,120	10,282	10,638
TOTAL SCHOLARS in public institutions .. .. Female .	1,980	2,003	1,856	2,082	2,007
TOTAL ..	10,620	11,540	11,976	12,364	12,645
TOTAL SCHOLARS (both male and female in all institutions)	14,085	14,505	15,020	15,358	16,774
Expenditure (in thousands of Rupees).	Rs.	Rs.	Rs.	Rs.	Rs.
From provincial revenues	1,44	2,20	2,95	404	4,83
From local funds	42	64	23	15	8
From Municipal funds	50	52	45	23	40
TOTAL EXPENDITURE from public funds.	2,36	3,36	3,66	4,42	5,31
From fees	95	1,13	1,28	1,39	1,41
From other sources	1,24	9,84	6,69	2,79	3,64
GRAND TOTAL OF EXPENDITURE ..	4,55	12,32	11,63	8,60	10,37

Local Self-Government.

Throughout the greater part of India, the village constitutes the primary territorial unit of Government organisation, and from the villages are built up the larger administrative entities—tahsils, sub-divisions, and districts.

"The typical Indian village has its central residential site, with an open space for a pond and a cattle stand. Stretching around this nucleus lie the village lands, consisting of a cultivated area and (very often) grounds for grazing and wood-cutting.... The inhabitants of such a village pass their life in the midst of these simple surroundings, welded together in a little community with its own organisation and government, which differ in character in the various types of villages, its body of detailed customary rules and its little staff of functionaries, artisans and traders. It should be noted, however, that in certain portions of India, *e g*, in the greater part of Assam, in Eastern Bengal, and on the west coast of the Madras Presidency, the village as here described does not exist, the people living in small collections of houses or in separate homesteads".—(*Gazetteer of India.*)

The villages above described fall under two main classes, *viz.*—

Types of Villages.—"(1) The 'severalty' or raiyatwari village, which is the prevalent form outside Northern India. Here the revenue is assessed on individual cultivators. There is no joint responsibility among the villagers, though some of the non-cultivated lands may be set apart for a common purpose, such as grazing, and waste land may be brought under the plough only with the permission of the Revenue authorities, and on payment of assessment. The village government vests in a hereditary headman, known by an old vernacular name, such as *patel* or *reddi*, who is responsible for law and order, and for the collection of the Government revenue. He represents the primitive headship of the tribe or clan by which the village was originally settled.

"(2) The joint or landlord village, the type prevalent in the United Provinces, the Punjab and the Frontier Province. Here the revenue was formerly assessed on the village as a whole, its incidence being distributed by the body of superior proprietors, and a certain amount of collective responsibility still, as a rule, remains. The village site is owned by the proprietary body, who allow residences to the tenantry, artisans, traders and others. The waste land is allotted to the village, and, it wanted for cultivation, is partitioned among the shareholders. The village government was originally by the *panchayet* or group of heads of superior families. In later times one or more headmen have been added to the organisation to represent the village in its dealings with the local authorities; but the artificial character of this appointment, as compared with that which obtains in a raiyatwari village, is evidenced by the title of its holder, which is generally *lambardar*, a vernacular derivative from the English word 'number.' It is this type of village to which the well-known description in Sir H. Maine's *Village Communities* is alone applicable, and here the co-proprietors are in general a local oligarchy with the bulk of the village population as tenants of labourers under them."

Village Autonomy.—The Indian village formerly possessed a large degree of local autonomy, since the native dynasties and their local representatives did not, as a rule, concern themselves with the individual cultivators, but regarded the village as a whole, or some large landholder as responsible for the payment of the Government revenues, and the maintenance of local order. This autonomy has now disappeared owing to the establishment of local, civil and criminal courts, the present revenue and police organisation, the increase of communications, the growth of individualism, and the operation of the individual *raiyatwari* system, which is extending even in the north of India. Nevertheless, the village remains the first unit of administration; the principal village functionaries—the headman, the accountant, and the village watchman—are largely utilised and paid by Government, and there is still a certain amount of common village feeling and interests.

Punchayets—For some years there was an active propaganda in favour of reviving the village council-tribunal, or *Punchayet* and the Decentralisation Commission of 1908 made the following special recommendations:—

"While, therefore, we desire the development of a *punchayet* system, and consider that the objections urged thereto are far from insurmountable, we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure We think that a commencement should be made by giving certain limited powers to *Punchayats* in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence, and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will become easier to apply the system in other villages. Such a policy, which must be the work of many years, will require great care and discretion, much patience, and judicious discrimination between the circumstances of different villages; and there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers."

This is, however, still mainly a question of future possibilities and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *panchayets* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

Municipalities.—The Presidency towns had some form of Municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under

this Act and subsequent Provincial Acts a large number of municipalities was formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most Provinces the commissioners were all nominated, and from the point of view of self-government, these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New Municipal Acts were passed for the various Provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881-2 Lord Ripon's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883-4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day. In several Provinces there are, besides municipalities, "notified areas," *i.e.*, small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

Local Boards.—The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different Provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Ripon's Government. Under the Orders of 1881-2 the existing local committees were to be replaced by a system of boards extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to Local Governments. The systems introduced in different parts of India by the Acts of 1883-5 (most of which are still in force) consequently varied greatly.

Mofussil Municipalities.—The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease according to the last decennial review (1902-12) and the number in 1911-12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable number of the smaller municipalities in the Punjab and United Provinces. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents not below a specified age, and property or status qualifications are generally laid down. The Chairman or President of the Municipal Corporation is sometimes nominated under the orders of the Local Government, but more often chosen by the commissioners from among themselves. Various provisions exist as to the exercise of control by Government, particularly as regards finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation require the sanction of the Local Government, or of a Commissioner. Proposals for giving municipal committees a larger degree of independence were put forward by the Decentralisation Commission, and some action on these lines has been taken. Government may provide for the performance of any duty which the commissioners neglect, and may suspend them in case of incompetence, default, or abuse of powers.

Municipal Revenues.—In the provinces in which octroi is levied generally, it is the most important source of income. The octroi duties have admitted disadvantages, but they are familiar through long usage to the inhabitants of the North and West of India. The possibility of abolishing them was under consideration during the last decade, and it was decided in the United Provinces to take this step in many municipalities, but the alternative of direct taxation is not a popular one. Precautions are taken to limit the tax to articles actually consumed in a town, and to prevent it from becoming a transit duty. The list of dutiable

articles contains in each case only staple articles of local consumption and goods in transit are allowed to pass in bond or receive a refund of the duties on leaving the town. Articles of food are the most important class of goods subject to octroi taxation.

Incidence of Taxation.—A tax on houses and lands is levied to some extent in all provinces, and is the main source of municipal revenue where there is no octroi. Taxes on professions and trades, and on animals and vehicles, are generally levied, as also is a water-rate in the large towns that have been furnished with water works. Tolls on road and ferries and lighting and conservancy rates contribute to the receipts in most provinces.

Municipal Functions.—Municipal functions are classified under the heads of public safety, health, convenience and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health, principally with reference to the provision of medical relief, vaccination, sanitation, drainage and water-supply, and measures against epidemics; and education, particularly primary education. Money is raised by loan for water-supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues.

THE PRESIDENCY TOWNS.

The corporations of the Presidency towns occupy a special position, and are constituted under special Acts.

Calcutta.—The municipal administration of Calcutta is regulated by the Calcutta Municipal Act of 1899, which replaced an Act of 1888, the working of which had not been altogether satisfactory. The Corporation, as remodelled by the Act of 1899, consists of a Chairman, appointed by the local Government, and fifty commissioners, half of whom are elected at triennial ward elections, while the remainder are appointed, four each by the Bengal Chamber of Commerce and the Calcutta Trades Association, two by the Port Commissioners, and fifteen by the local Government. The Act also constitutes a smaller body, the General Committee, consisting of the Chairman with twelve of the commissioners, four elected by the ward commissioners, four elected by the other commissioners and four appointed by the local Government. There are various special committees and sub-committees. An amending Bill has been published.

The entire executive power is vested in the Chairman, to be exercised subject to the approval or sanction of the Corporation or General Committee, whenever this is expressly directed in the Act. To the Corporation are reserved the right of fixing the rates of taxation and such general functions as can be efficiently performed by a large body, while the General Committee stands between the deliberative and executive authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone. Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects. A new Municipal Act is now before the Bengal Legislative Council.

Bombay.—The Municipal Corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872 and continues to be regulated by the Act of 1888 as amended. Some important changes were made by the City of Bombay Police Charges Act of 1907 which relieved the Corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief and vaccination.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the Justices of the Peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors but is not, like the chairman of the Calcutta Corporation, an executive officer. The chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors.

Steps are now being taken to amend the Bombay Municipal Act in the direction of greater popular control and a lower franchise.

Madras.—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons, as the Local Government might direct, while the number to be elected as divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899.

DISTRICT AND LOCAL BOARDS.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. The systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as 'Unions", each controlled by a PANCHAYAT. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally, there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and TALUKAS respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the Local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1906. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles", and the circles into "groups", each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy Commissioners of districts.

Elective Principle.—The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards only, was extended to the Taluk Boards in 1909. In the United Provinces and the Central Provinces there is a substantial majority of elected members.

Chairmen.—The various Acts usually leave it to the Local Government to decide whether the Chairman of the district board shall be elected or nominated. In most provinces the Collector was, as a general rule, appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the Local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

Sub-District Boards.—The Decentralisation Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

Revenue and Expenditure.—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in ryatwari provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Substantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and ferries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the District Boards may allot to them. In Madras the Taluk Boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

THE PRESENT POSITION.

A brief survey of the progress of municipalities and district boards during 1920 reveals first, the gradual awakening of a new spirit in response to the altered policy of the administration; and secondly the amount of leeway which has to be made up before the institutions, of local self-government in India can range themselves on a footing equal to that of corresponding institutions in the West. Taking first municipalities there are some 730 municipalities in British India, with something under 18 million people resident within their limits. Of these municipalities roughly 530 have a population of less than 20,000 persons and the remainder a population of 20,000 and over. As compared with the total population of particular provinces the population resident within municipal limits is largest in Bombay where it amounts to 17 per cent. and is smallest in Assam where it amounts only to 2 per cent. In other provinces it varies from 3 to 9 per cent. of the total population Turning to the composition of the municipalities considerably more than half of the total members are elected. *Ex-officio* members are roughly 13 per cent. and nominated 32 per cent. Elected members are almost everywhere in a majority. Taking all municipalities together, the non-officials outnumber the officials by nearly five to one. The functions of municipalities are classed under the heads of Public Safety, Health, Convenience and Instruction. For the discharge of these responsibilities, there is a municipal income of just under £ 10 6 millions, two-thirds of which is derived from taxation and the remainder from municipal property, contributions from provincial revenues and miscellaneous resources. Generally speaking, the income of municipalities is small, the four cities of Calcutta, Bombay, Madras and Rangoon together providing nearly 38 per cent. of the total. The average income of all municipalities other than the four mentioned above is only some £ 9,000 The total expenditure of municipalities excluding that debited to the head "Extraordinary and Debt" amounted in 1918-19 to £ 9 9 millions. The heaviest items of this expenditure come under the heads of "Conservancy" and "Public Works" which amount to 17 per cent. and 15 per cent. respectively. "Water-Supply" comes to 8 per cent, "Drainage" roughly to 6 per cent and "Education" to no more than 7·6 per cent. In some localities the expenditure on education is considerably in excess of the average. In the Bombay Presidency excluding Bombay City, for example, the expenditure on education amounts to more than 18 per cent of the total funds while in the Central Provinces and Berar it is over 15 per cent.

District Boards.—In view of the fact that only 10 per cent of the population of British India lives in towns, municipal administration, however efficient, cannot affect in any large degree the great mass of the people. Hence it is that particular importance attaches in India to the working and constitution of the district boards, which perform in rural areas those functions which in Urban areas are assigned to the municipalities In almost every district of British India there is a board, subordinate to which are two or more sub-district boards, while in Bengal, Madras and Bihar and Orissa, there are also Union Committees. Throughout India at large there are some 200 District Boards with roughly 550 sub-district boards subordinate to them There are also more than 850 Union Committees This machinery has jurisdiction over a population which was some 212 millions in 1918-19. The members of the Boards numbered more than 13,000 in 1918–19, of whom 52 per cent. were elected During 1920, the tendency has been throughout India to increase the elected members of the District Boards at the expense of the nominated and the official members The boards are practically manned by Indians who constitute 94 per cent of the whole membership. Only 19 per cent of the total members of all boards are officials of any kind. The total income of the Boards in 1918 19—the latest figures available—amounted to £ 8 7 millions the average income of each district board together with subordinate boards being £47,000 The most important item of revenue is provincial rates, which represent a proportion of the total income varying from 20 per cent in the Central Provinces to 58 per cent. in Bihar and Orissa. This income is mainly expended upon civil works, such as roads and bridges (£ 3·6 millions) the other principal objects of expenditure being education (£ 2·3 millions) medical and sanitary works (£ 0 8 millions) and general administration.

Civic Improvement—One interesting feature of 1920 is the activity displayed by the great cities of British India in the direction of civic improvement Mention has been made of the beneficent activities of the Improvemrnt Trusts of Bombay and Calcutta, in ameliorating the conditions under which the masses live. Particular attention has been paid in both places to the housing problem which indeed cries aloud for urgent solution. Development Commissioners called trustees, have been appointed with the object of accelerating the work of the trusts; the funds available which have during the year been augmented by civic loans, are very large. Improvement Trusts have recently been constituted in Cawnpore and Lucknow in the United Provinces; important schemes have been sanctioned and are in the course of execution. These projects, however, are naturally of less magnitude than the operations of the Trusts of Bombay, Calcutta, and Rangoon, the cost of which runs into millions sterling. The scheme, which has now been projected for the reclamation of Back Bay in Bombay will challenge comparison both in its magnitude and in the results which its success may achieve, with municipal operations almost anywhere else in the world. In the case of Calcutta, the clearing of congested districts, the development of suburban areas, and the institution of far-reaching drainage schemes, indicate a breadth of vision and command over the resources which would be a source of pride to the inhabitants of any city within the British Empire.

Greater Independence.—The general relaxation of Governmental control over local bodies is steadily proceeding, and there have been notable signs that the additional responsibility thrown upon members both of the municipalities and the district boards is inducing them to take a greater interest in their work. In Bengal there are 115 municipalities outside Calcutta, and the interest taken in civic affairs continues to increase. In most towns the ordinary municipal services are moderately efficient On the other hand, only 46 of these municipalities have an income of over £ 3,000 a year, while 26 have actually to carry on their work on less than £ 1,000 a year. Considering that the total municipal population, leaving Calcutta out of consideration, is some 2 millions, calculation shows that the expenses of municipal administration amount only to some seven shillings per head of the population. Roads and public works, conservancy, water-supply and general administration consume more than half the total revenue, and the remainder has to carry the charges for education, medical relief, sanitation and the like. In spite of revised assessments, the income of the majority of municipalities in **Bengal** remains practically stationary. The reluctance of the district boards to tax themselves is a feature which is not confined to Bengal. The reports of the administration of district boards up and down India reveal the fact that while the majority of those who serve upon them are quite alive to the advantages of improved administration, they are unwilling to face the corresponding financial obligations. The general impression still remains abroad that the Provincial and Central Governments possess an inexhaustible purse, from which they are only prevented by contumacy from relieving all the financial embarrassments and limitations under which the district boards labour.

Up to the end of 1920, about 1,500 **Union Boards** had been established in Bengal, and many more were in the process of creation. Already these new institutions are displaying a keen sense of responsibility and corporate activity, and it is believed that a wide extension of the scheme will result in the development of a strong sense of communal interest accompanied by a progressive, if modest policy of village improvement through the promotion of public health and general well-being. A similar development may be noticed in Bombay, where an act for constituting or increasing the powers of village communities has been passed by the Legislative Council. In this Presidency some 75 out of 157 municipalities had a two-thirds elected majority of Councillors in the year 1919-20; and a distinct step forward has been projected by the administration in the direction of liberalising the constitution of the municipalities. The policy of appointing non-official Presidents has been extended both to district and sub-district boards, with the result that 12 out of 26 district boards and 29 out of 219 sub-district boards in the Presidency possessed non-official Presidents by the end of the year. All the district boards and most of the sub-district boards have non-official vice-Presidents.

In **Madras** also, the institutions of local self-government continued to progress in an encouraging manner. In the year 1919-20, 41 municipal councils consisted entirely of Indian members as against 32 in the previous year; and out of the actual number of councillors amounting to just over 1,000, nearly 700 were elected directly by the ratepayers. The average imposition of taxation per head of population although still very low, rose from three shillings and ten pence to four shillings. Expenditure, a substantial proportion of which was devoted to public works, rose in a comparatively satisfactory manner by £ 100,000 to a figure of over a million sterling. The net educational charges amounted to nearly 6 per cent. of the income from general taxation; and the number of educational institutions maintained by municipalities increased to 895, a figure which represents an increase of 82 over that of previous year. In the United Provinces there was considerable if unostentatious progress during the year 1920. While it would appear that some of the boards still display defects and weaknesses, there are signs in others of the growth of stronger public spirit and a clearer realisation of the evils which arise from undue indulgence in dissension Some of the Boards, whose financial position is admittedly unsatisfactory are making determined efforts to put their house in order by imposition of additional taxation.

The total municipal income fell from £ 1,19 million to £ 1,14 million, a decrease entirely accounted for by a reduction in Government contributions. On the whole the income from municipal resources was much the same as last year, and is still inadequate for a satisfactory programme of municipal improvement. In the **Punjab** Municipal administration continues to show improvement. Certain municipalities are reported to be conspicuously lacking in public spirit or swayed entirely by personal interest and party factions. But in the majority there are distinct signs of the awakening of civic responsibility. In four municipalities, non-official Presidents have been elected in place of officials, and this policy of the withdrawal of official control has undoubtedly increased interest in municipal affairs and strengthened the desire among the generality of citizens to become members of the municipal committees. Conscientious efforts are being made in many places to deal with overcrowding; and there has also been further attention to medical institutions. Education has also received a full share of attention, particularly in Lahore and in Multan; and a number of municipalities throughout the Punjab are taking steps to carry out comprehensive schemes of drainage and water supply. Turning to District Board administration the event of outstanding importance during this period has been the **reconstruction** of all the district boards in the Punjab and the institution of new electoral rules. The financial resources of the district boards show satisfactory increase. During 1920, the gross income from district boards in the Punjab amounted to £1·07 millions—double the gross income of ten years ago. So far as expenditure is concerned, we find that the total figure for district boards in the Punjab was £ 0·98 millions, representing an increases of £ 170·000 over the figure for 1918-19. Considerable increases in expenditure are to be noticed under the heads of medical, education and sanitation. District Boards are also devoting attention to

the opening of demonstration farms to sheep breeding and to sericulture.

In the **Central Provinces** the year witnessed the passing of a Local Self-Government Act which only awaits the framing of rules to guide into proper channels the undoubtedly growing interest in public matters. The continued reduction of official members and chairmen, and the wider powers of control given to local bodies will afford an incentive to the development of local self-government leading to an increased sense of public duty and responsibility. Village self-government was also stimulated by the passing of the **Village Panchayat Act**. But municipalities and district councils alike require development upon the financial side before they can realise the opportunities which lie before them. At present they are mainly dependent upon Government grants, and before their position can be pronounced satisfactory local sources of revenue must be expanded.

In the **North-West** Frontier Province, the institutions of local self-government are somewhat of a foreign growth. Certain of the municipal committees are very lax in the discharge of their responsibility, and meetings are reported to be infrequent. None the less the attendance of non-official members at meetings increased in every municipal committee during the year 1919-20, although the attitude of members towards their duties continued in the case of several municipalities to be disappointing and unsatisfactory.

Local Government Statistics.

Municipalities.—With this general introduction we can now turn to the statistical results of the working of Local Self-Government. The following table gives information as to the constitution of municipal committees, taxation, &c., in the chief provinces in 1918-19:—

	Population within Municipal Limits.	Number of Municipalities.	Total Number of Members	By Qualification.		By Employment.		By Race.		Incidence of Municipal Taxation per head.
				Ex-Officio.	Nominated	Elected	Officials	Non-Officials.	Europeans.	Indians.	
											£ s. d.
Presidency Towns.											
Calcutta	861,591	1	50	..	25	25	3	47	17	33	0 15 4
Bombay	979,445	1	72	..	16	56	5	67	16	56	1 0 11
Madras	518,660	1	33	1	12	20	4	29	8	25	0 6 5
Rangoon	284,935	1	25	1	6	18	2	23	12	13	0 16 2
District Municipalities											
Bengal	1,973,799	115	1,579	6	402	994	172	1,407	124	1,455	0 3 5
Bihar and Orissa	1,185,617	57	795	131	188	476	151	644	77	718	0 2 1
Assam	131,030	23	241	40	72	129	50	191	30	211	0 3 9
Bombay and Sind	2,374,895	156	2,222	354	781	1,087	410	1,812	95	2,127	0 4 4
Madras	2,277,006	72	1,051	6	372	673	188	863	87	964	0 2 7
United Provinces	2,966,648	83	1,015	62	88	865	81	934	72	943	0 2 11
Punjab	1,626,506	101	1,184	223	357	604	245	939	78	1,106	0 4 5
N. W. Frontier Province	141,928	6	117	34	83	..	35	82	15	102	0 6 5
Central Provinces and Berar	925,219	59	813	25	281	507	158	655	45	768	0 3 5
Burma	694,169	44	563	176	290	97	192	371	110	453	0 3 10

Sanitation.

The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done; but the progress of rural sanitation which involves the health of the great bulk of the population has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling to domestic customs injurious to health. While the inhabitants of the plains of India are on the whole distinguished for personal cleanliness, the sense of public cleanliness has ever been wanting. Great improvements have been effected in many places; but the village house is still often ill-ventilated and over-populated; the village site dirty, crowded with cattle, choked with rank vegetation, and poisoned by stagnant pools; and the village tanks polluted, and used indiscriminately for bathing, cooking and drinking That the way to improvement lies through the education of the people has always been recognised"

Of recent years the pace has been speeded up as education progressed, education developed, and funds were available. In a resolution issued in May 23rd, 1914, the Government of India summarised the position at that time, and laid down the general lines of advance. This resolution (*Gazette of India*, May 25th, 1914) should be studied by all who desire to understand the present position and policy: its main features are summarised here.

The governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, imperial grants amounting to Rs 30,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three All-India sanitary conferences were convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the **Indian Research Fund Association** has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover since the constitution of the new department of the Government of India, imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55 23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82·33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

Organisation.—As a result of the Plague Commission's Report Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages, the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Government of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

The Sanitary Organisation.

The sanctioned strength of the superior sanitary organisation in India now is

(*a*) A Sanitary Commissioner with the Government of India.

(*b*) A bacteriological department comprising—

(*i*) thirteen laboratory appointments distributed as follows:—

Central Research Institute	1 Director and 3 Assistants.
Bombay Bacteriological Laboratory . ..	1 Director and 2 Assistants
King Institute of Preventive Medicine, Madras .	1 Director and 1 Assistant.
Pasteur Institute, Kasauli	1 Director and 1 Assistant
Pasteur Institute, Coonoor	1 Director and 1 Assistant.

(*ii*) fifteen new appointments recently sanctioned for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments :—

Province.	Sanitary Commissioners.	Deputy Sanitary Commissioners.	Health Officers, Sanitary Engineers.			
			1st class.	2nd class.	Sanitary Engineers.	Deputy or Assistant Sanitary Engineers
Madras	1	3	12	19	1	6
Bombay	1	5	4	9	1	..
Bengal	1	5	6	17	1	2
United Provinces	1	4	11	17	1	3
Punjab	1	2	2	5	1	1
Burma	1	2	4	16	1	2
Bihar & Orissa	1	3	2	8	1	2
Central Provinces	1	..	..	2	1	..
Assam	1	1	..	..	1	..
North-West Frontier Province	1	1	1	1	..	..
Delhi	1	..	3	..	1	..
Total	11	26	45	94	10	16

Provincial Agency.—In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of Deputy Sanitary Commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of Deputy Sanitary Commissioner, thirty-five appointments of health officer of the first-class and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional Deputy Sanitary Commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency, and have recently been taken by legislation in Bengal. Simultaneously, the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

Voluntary Agency.—The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333) a sum equivalent to that given by the Bombay Government to the BOMBAY SANITARY ASSOCIATION, which was founded in 1903, and now has corresponding branches in several districts and Native States.

Research.—The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an imperial department is no departure from that policy, and the large imperial grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments. The Sanitary Commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of Local Governments over the officers under their control.

Provincial Officers.—The position of Provincial Sanitary Commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions but they desire to insist on the importance of defining the functions of the two officers and securing to the Sanitary Commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

Sanitary Boards.—In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the

addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

Training.—Arrangements for training the superior sanitary staff are now engaging the attention of the Government of India. The chief difficulty at present is to provide courses in practical hygiene and in the study of the bacteriology and etiology of tropical diseases. It is hoped in the near future to make arrangements in India for the former and to utilise the schools of tropical medicine at Calcutta and elsewhere for the latter. Meanwhile, a British diploma in public health is required from candidates for the post of Deputy Sanitary Commissioners and health officers of the first class. The problems of public health in India are vitally complicated by the fact that biting insects are a prominent factor in the dissemination of disease and it is obviously desirable to provide in India, as soon as possible, a complete course of training for sanitary officers.

Training classes for sanitary inspectors are now held in all the more important provinces.

Department of Public Health.—A substantial beginning has thus been made for the development of a department of public health and Indians have been freely enlisted for it. The posts of Deputy Sanitary Commissioner and health officer are now open to Indians. Nine Deputy Sanitary Commissioners out of 26 and the majority of health officers are Indians. The new bacteriological department consisting of 28 officers is also open to duly qualified Indians

As health officers and Sanitary Engineers gradually relieve Deputy Sanitary Commissioners of much of the drudgery of inspection and routine work, it is hoped that the latter will be set free to deal with epidemics and communicable diseases from a higher plane, and to consider issues of public health wider than those which they are able to review to-day. It is therefore important to provide in advance free interchange between them, the laboratory workers and those carrying out practical research in the field.

Progress of Research.—Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. The discovery by Sir Ronald Ross of the part played by the mosquito in the communication of malaria and the appointment of the Plague Commission in 1898 are landmarks in the history of Indian Sanitation. In 1902, a research institute was founded at Guindy in Madras, named the King Institute after Lieutenant-Colonel King, C.I.E., I.M.S, in view of his devoted efforts in the cause of sanitation in that presidency. In 1905 Lord Curzon's Government summed up the position and the policy of the Government of India in regard to the establishment of laboratories for the study of problems of public health in India. The functions of the central-laboratory were original research, the preparation of curative sera and the training of scientific workers. The functions of the provincial laboratories were diagnosis and special research connected with local conditions. This policy has been steadily developed. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur Institutes exist at Kasauli, Coonoor, Shillong and Rangoon.

Besides the routine work connected with the bacteriological diagnosis of disease, antirabic treatment, the manufacture of various vaccines and sera and general research, these laboratories at different times have been the centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research.

Research Fund Association.—The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The control and management of the association are vested in a governing body, the president of which is the Member in charge of the Education Department of the Government of India. The governing body is assisted by a scientific advisory board, of which not less than three members have seats on the governing body. They examine all proposals for work in connection with the scientific objects of the association and report as to their importance and feasibility. The members of this board are appointed for one year, but are eligible for re-election, and they have power to add to their number. The present members are the Director-General, Indian Medical Service, the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute at Kasauli, the Officer in charge of the Central Malarial Bureau and the Assistant Director-General, Indian Medical Service (Sanitary). Sir Ronald Ross has been elected an honorary consulting member. The membership of the Indian Research Fund Association is open to non-officials. Every donor of Rs. 5,000 is entitled to become a permanent member, while every subscriber of Rs. 100 per annum can be a temporary member. Members of the association are entitled to attend and take part in the annual general meeting of the association and to receive copies of the reports and other publications issued from time to time by the association. Although, so far, the fund has been financed solely by the Government of India, it is hoped that in time Indian philanthropists will contribute towards the expansion of the association by founding chairs of research by financing experimental research measures and otherwise.

The association has also started a journal for the publication of medical research work done in India—the "INDIAN JOURNAL OF MEDICAL RESEARCH"—published quarterly. The favourable reception which has been accorded to

the first three numbers is evidence of the increased interest that is being taken in sanitary science in India to-day.

Water Supply.—Few subjects have received more attention of late than the provision of a piped supply of filtered water in towns. Complete figures are not available but sums amounting to at least Rs. 3,51,58,297 (£2,343,886) have been spent during the last 20 years on completed schemes. Projects costing Rs. 1,10,03,433 (£933,562) are under construction and projects costing Rs. 1,14,44,750 (£762,983) have been prepared and sanctioned. These figures are exclusive of the expenditure in the Presidency towns and Rangoon.

Drainage.—Drainage schemes on modern lines, are the basis of all sanitary improvement in urban areas. The demand for them is scarcely less than that for piped water and is steadily on the increase. As in the case of water supply complete figures are not available but the known expenditure during the last twenty years has been considerable and is now rapidly increasing. The expenditure on completed works outside the Presidency towns and Rangoon during that period amounted to Rs. 97,65,049 (£651,003), whereas the cost of the works under construction is estimated at Rs. 1,54,20,502 (£1,028,033). In the beginning precedence over drainage was given to piped water-supply but experience has demonstrated the advantage of introducing both concurrently. Without drainage there is no means of carrying off the surplus water and without piped water-supply it is difficult to flush the drains properly.

When drainage schemes on modern lines were first started in this country, there seems to have been a bias against the use of sewers, and, wherever possible, open drains were adopted. Experience has shown that the preference for the open drain and the fear that sewers would give excessive trouble were not well founded. On the contrary, much of the advantage of a drainage system is lost if only open drains are used, as the old system of hand-carriage latrines has to be continued. Moreover, economy in establishment is possible only in the case of a sewage system.

Pilgrimages.—Pilgrimages necessitating as they do the collection of large numbers of persons, often more than a million, at one place at one time have an important sanitary aspect mainly in connection with cholera and other communicable diseases. The Government of India recently decided to examine the sanitary arrangements at the chief places of pilgrimage throughout India and local Governments were asked to appoint provincial committees for this purpose under the presidency of the Sanitary Commissioner with the Government of India with a view to formulate practical schemes of improvement. The inquiry is still in progress but the Government of India have already made a grant of Rs. 2 lakhs (£13,333) and promised an additional grant of 4 lakhs of rupees (£26,666) spread over four years towards the improvement of the pilgrim route to Badrinath; and they have made a further recurring grant of Rs. 20,000 (£1,333) a year for the same object. The important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Musulmans has undergone close scrutiny. A grant of Rs. 4½ lakhs was made in 1918-19 for the improvement of sanitary arrangements in connexion with various pilgrim centres.

Rural Sanitation.—The following observations are based on practical experience of rural sanitation:—

(*a*) Travelling dispensaries may be used to spread a knowledge of the simple facts regarding the more common diseases. For this purpose the sub-assistant surgeons in charge should be given a special training in hygiene. Once they become known to the people as healers of the sick their advice as sanitarians may become more acceptable.

(*b*) The improvement of the village water-supply is as important as it is difficult. Apparently, excellent results have been obtained by disinfection of wells with permanganate of potash. Experiments are being made in different parts of India in the use of tube-wells, etc. It might serve as an useful object lesson to use pumps and tube-wells for the provision of water at fairs, schools, hospitals, and local public offices. In some localities, a tank supply alone is possible and the difficulty is to protect even new tanks from pollution.

(*c*) In several provinces, notably in Madras, village unions or circles have been formed and their committees entrusted with small grants for the improvement of the sanitation of the village site. This measure might be extended experimentally elsewhere. It is calculated to encourage discussion and inquiry regarding sanitary work.

(*d*) Village midwives are, in some districts, encouraged by small grants of money and rewards to attend at the head-quarters hospital for a short and simple course of training. These measures open up possibilities with reference to a reduction in infantile mortality and children's diseases generally.

(*e*) In most districts in India, the civil surgeon is also in theory the sanitary officer of the district. His duties at head-quarters, however, do not allow him to tour and inspect in the district to the extent that is necessary; even in the case of epidemics in the district it is sometimes not possible for him to leave headquarters. In some provinces, district sanitary officers have been appointed and there can be little doubt that many more such appointments are required and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well qualified and whole-time district health officers to control and organise all sanitary arrangements and experiments in the district.

Birth and Death Rates.—The population of the areas in which births and deaths were registered in 1919 was 238,482,205. 7,212,415 births and 8,554,178 deaths were registered; the rates per mille being 29·54 and 35·87 as compared with an average of 37·31 and 36·84 respectively for the previous five years.

The lowest birth rates were recorded in Madras 25·5; Coorg 26·35, Bengal 27·5 and Bombay 27·9; but an excess of deaths over births was noticed in almost all the provinces, except the Punjab, Delhi, North-West Frontier Province and Ajmer-Merwara. The death-rates were lower in all the Provinces excepting Assam than in the preceding year

Province.	Birth Rates (per mille).		Death Rates (per mille).	
	1918.	1919.	1918.	1919.
Delhi	47·9	15·8	93·17	12·00
Bengal	32·9	27·5	38·1	36·2
Bihar and Orissa	37·5	30·4	46·7	40·0
Assam	34·98	30·52	46·10	50·09
United Provinces	39·89	32·39	82·37	41·69
Punjab	30·6	40·3	81·0	28·3
N. W. Frontier Province	30·6	28·6	50·3	28·6
Central Provinces and Berar .. .	43·24	34·31	102·6	43·24
Madras	28·9	25·5	43·0	27·2
Coorg	29·67	26·35	42·25	35·36
Bombay	31·61	27·90	88·05	32·53
Burma, Lower	31·62	28·05	39·2	30·16
Burma, Upper	35·29	32·91	40·22	32·62
Ajmer-Merwara	26·35	30·01	114·78	28·67
Total	35·35	30·24	62·46	35·87

Chief Diseases.—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indication of scurvy widely prevail. The table below shows the number of deaths from all causes and from each of the principal diseases in British India and death-rates per 1,000:—

Years.	Deaths from all Causes.	Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhœa.	Plague.	Respiratory Diseases.
1914 ..	7,155,771	280,730	76,590	4,092,345	278,225	266,588	261,149
		1·18	·32	17·16	1·17	1·12	1·09
1915 ..	7,142,412	404,472	83,282	3,990,287	261,800	380,501	257,721
		1·70	·35	16·73	1·10	1·60	1·08
1916 ..	6,940,436	288,047	60,642	4,085,784	248,381	205,527	286,247
		1·21	·25	17·13	1·04	·86	1·20
1917 ..	7,803,832	267,002	62,277	4,555,221	260,984	437,036	316,821
		1·12	·26	19·10	1·10	1·83	1·33
1918 ..	14,895,801	560,802	93,076	11,134,441	276,618	440,752	430,935
		2·35	·39	46·69	1·16	1·85	1·81
1919 ..	8,554,178	578,426	136,077	5,468,181	291,643	74,284	350,133
		2·43	·57	22·93	1·22	·31	1·47

Mortality.—There is no method by which the deaths actually due to influenza in 1918 can be calculated. If it be assumed that the excess in the deaths in 1918 over the mean of the previous 5 years was the result—direct or indirect—of influenza, the figure would come to 7,718,307. This is an overestimate owing to the disturbing factor of other epidemic diseases, such as plague, cholera, malaria and relapsing fever, which raised the mortality in various parts of India during the first half of the year. There is no certain evidence that influenza was present in India before June 1st: it is, however, probable that if it were, it had no appreciable influence on the death rate for India as a whole. This suggests that the excess in the mortality from all causes between June 1st and December 31st over the 5 years mean—6,812,633—may be a more reliable index. This may, however, be a slight underestimate, for, in the last half of 1918 the mortality from plague was exceptionally low as compared with the quinquennial mean.

Another estimate may be obtained by subtracting from the total mortality from all causes the deaths registered as due to the chief epidemic diseases—plague, cholera and small-pox, and comparing this figure with one similarly obtained for the previous quinquennium. On this basis the estimate would be 7,304,478. A fourth figure may be estimated by taking the excess in the mortality from "fevers" and respiratory diseases over the average for 5 years. In 1918 this excess came to 7,151,971.

Without any claim to accuracy it is suggested that the mortality directly and indirectly due to influenza was in the neighbourhood of the mean of the last three figures, 7,089,694.

Cholera.—578,426 deaths were registered in 1919 against 560,802 in 1918 404,303 of the deaths occurred in the four provinces of Bengal, Bihar and Orissa, Madras and United Provinces. The death-rate from cholera for India was 2·43 against 2·35 in 1918. No part of India was absolutely free from the disease during the year, but in Delhi Province, the Punjab, Coorg and Ajmer-Merwara the death rate was 0.90 or less.

Dysentery and Diarrhœa.—A year in which cholera is prevalent means a rise in the number of deaths ascribed to these diseases. In 1919, 291,643 deaths were recorded as compared with 267,648 in 1917. The death rate was 1·22, against 1·11, the quinquennial mean. The highest death rates were returned by the Central Provinces and Assam.

Small-pox—caused 136,077 deaths, of these 41,732 occurred in the Madras Presidency. The death rate was 0·57 as compared with a quinquennial mean of 0·31

Plague.—74,284 deaths were registered against 440,752 in 1918. 414,170 of the deaths occurred in the first half of the year and 26,582 in the second half In 1917 the corresponding figures were 241,757 and 195,279. The plague year does not correspond with the calendar year. it runs from July 1st of one year to June 30th of the next. The low mortality in the second half of 1918 corresponds with the first half of 1918-19 epidemic and is about one-fifth of the mean mortality from plague during the corresponding period of the past twenty years. It cannot be claimed that this reduction in mortality is due to plague preventive measures, although there are signs that popular appreciation of such measures is growing: the low incidence of plague was probably directly connected with the meteorological and agricultural conditions of the year

The most satisfactory symptom of the growing public confidence in anti-plague measures is the increased demand or inoculation with anti-plague vaccine. The greatest reliance is placed on evacuation. Valuable as this measure undoubtedly is, it may spread infection. Refugees from a plague infected town or village in some cases go with their goods and chattels to uninfected towns or villages, the epidemics in which are sometimes traceable to this immigration

Rat destruction is not popular There is no doubt that an efficiently conducted rat campaign is of great value, but the co-operation of the people is difficult to secure.

Fevers.—It is perhaps more difficult than usual to analyse the deaths ascribed to "fevers." 5,468 181 deaths, or 63·9 per cent. of the total deaths were included under this head. 7,402,076 fever deaths were registered during the last quarter of the year when influenza was prevalent, a figure in excess of the annual mortality from all causes recorded in six out of the previous ten years. The decennial mean for mortality from fevers is 4,979,432.

THE HEALTH OF THE ARMY.

British.—The average strength of European Troops, Regulars and Territorials, in India during 1918 was 87,982 as compared with 80,825 in 1917. The following table shows the main facts as regards the health:—

Period.	Average strength.	Admissions.	Deaths.	Invalids sent home.	Average constantly sick.
1910-14 average	69,440	39,389	303	488	2,094·57
1915	44,891	36,952	267	889	1,754·19
1916	60,737	46,892	397	1,343	2,414·56
1917	80,825	62,372	390	1,337	3,686·45
1918	87,982	90,637	1.424	2,007	5,286·61

Period.	Ratio per 1,000 of strength.				Average period of illness of each soldier calculated on average strength.	Average duration of each case of sickness.
	Admissions.	Deaths.	Invalids sent home.	Average constantly sick.		
1910-14 average	567·2	4·51	7·03	30·13	*10·00	*19·39
1915	823·1	5·95	19·80	39 08	14·26	17·33
1916	772·0	6·54	22 11	39·75	14·55	18·85
1917	771·7	4·83	16·54	45·60	16·65	21·57
1918	1,030·2	16·19	22·81	60 00	21·93	21·29

* Worked out on quinquennium aggregates.

The high admission and death ratios were in great measure contributed to by the pandemic of Influenza, the admission and death ratios for which alone were 219·5 and 8·81. Heatstroke caused ratios of 10·4 and 1 10, respectively, which were considerably above the normal, whilst venereal diseases again showed an increased incidence.

Indian.—The average strength of Indian troops including those on duty in China and other stations outside India, but excluding those under field service conditions, was 341,458 in 1918 as compared with 191,242 in 1917.

The following table gives the actuals and ratios of sickness, deaths, and invaliding for the years 1918, 1917, 1916, 1915 and the averages for the quinquennial period 1910-14 :—

Period.	Average strength.	Admissions.	Deaths.	Invalids.	Average constantly sick.	Ratio per 1,000 of strength.			
						Admissions.	Deaths.	Invalids.	Average constantly sick.
1910–14 (average) .	130,261	71,213	573	699	2,662	544 6*	4 39*	5·4*	20·7*
1915.. ..	119,985	89,315	1,026	5,415	4,065	744·4	8·55	45·1	33·9
1916.. ..	139,076	105,333	1,248	3,745	5,250	757·4	8·97	26·9	37·7
1917.. ..	191,242	141,787	2,201	3,421	6,556	741·4	11·51	17·9	34·3
1918.. ..	341,458	292,393	9,959	6,539	13,897	856·3	29·17	19·2	40·7

* Worked out on quinquennial aggregates.

There were 292,393 admissions for all causes as compared with 141,787 in 1917, the corresponding ratios being 856 3 and 741 4. This great increase in the admission rate is accounted for by the pandemic of influenza which occurred during 1918. The admission ratio for influenza alone was 136 8 as compared with 1 8 for 1917. Venereal diseases, respiratory diseases, diarrhœa and sandfly fever also show increased ratios. Against these increases there has been a considerable reduction in the admission ratios for malaria and pyrexia of uncertain origin, compared with 1917 and 1916.

HEALTH OF THE GENERAL POPULATION.

Births.—The births in 1919 numbered 7,212,415, less by 1,218,145 than the number recorded in 1918. The birth rate was 30·24 as compared with a quinquennial mean of 37·85. The fall in the birth rate is due mainly to interference with registration caused by the widespread epidemic of influenza. The death of many expectant mothers was naturally a contributory cause, as may also have been the absence from India of many men on military service. The full effect of influenza on the birth rate, unless it be masked by more perfect registration, should be more apparent in subsequent years. All provinces excepting the Punjab and Ajmer-Merwara shared in the reduced birth rate.

Every year in each part of India a great divergence is noted between the maximum and minimum birth rate for each registration unit. The discrepancy is so wide that it can only be explained by difference in the accuracy of registration. Speaking generally the inaccuracy is more apparent in municipal than in rural areas.

Deaths —8,554,178 deaths were registered as compared with 14,895,801 in 1918; a decrease of 6,341,623. The death rate was 35·87 as compared with a quinquennial mean of 36·84. The rural death rates for India as a whole have always been below the urban, but in 1918 it was in excess by 6·22. The excess in the rural death rate was especially marked in Delhi Province (43·54), Punjab (11·73), North-West Frontier Province (17·11), Central Provinces (27·53) and Bombay (25·54). In Burma alone the urban death rate exceeded the rural. In Bengal, Bihar and Orissa and Assam the rural death rates are usually in excess of the urban: the excess during 1918 was more marked than usual.

MEDICAL INSTITUTIONS.

Hospitals, Dispensaries, &c.—There were 2,991 of these institutions in existence at the end of 1917; during 1918 the number increased by 120, giving a total at the end of 1918 of 3,111.

The total number of patients treated has decreased from 35,588,432 in 1917 to 35,154,165 in 1918. The number of operations has decreased from 1,371,536 in 1917 to 1 326,182 in 1918, a decrease of 45,354.

The diminished number of in-patients and out-patients and operations performed is purely attributable to the lack of subordinate personnel owing to the heavy demands on their services for war purposes.

Medical Colleges.—There are five medical colleges (Bombay, Madras, Calcutta, Lahore and Lucknow), the students in which numbered in 1916, 2,730 including a few women. There are also 15 medical schools, the students in which numbered 2,936. There is an X-ray institution at Dehra-Dun where a class of instruction was attended by 20 students. Branch installations opened at Delhi and Simla are obtaining a large number of patients.

Pasteur Institutes.—There were Past ur Institutes for anti-rabic treatment at Kasauli (Punjab), Coonoor (Madras), Shillong (Assam) and Rangoon (Burma). In these four institutes 8,632 patients were treated during the year.

Lunatic Asylums.—The treatment of lunatics at asylums prevails on a comparatively small scale; but the asylum population is steadily increasing. The number of asylums in 1919 was 23. The number of patients admitted was 2,608 as against 3 093 in 1918. The total asylum population of the year was 10,262.

Leper Asylums.—There are many leper asylums among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers.

CHILD WELFARE MOVEMENT.

An increasing interest in the welfare of the child is one of the outstanding features of social life in the twentieth century. All the more progressive countries are doing something to improve the conditions of child life, and India has fallen into line with a scheme which, though it is still in its infancy, has caught the imagination of the more advanced Indian women The movement differs from previous efforts to help women and children in that it deals with the normal healthy child rather than with the already ailing baby. It has for its object the preservation of health rather than its restoration. It stresses preventive rather than remedial measures.

The movement in India is confronted with a formidable array of obstacles. Mothers in all countries believe themselves possessed of a heaven-born wisdom as far as their own babies are concerned, but in countries where there is compulsory education it is at least possible to get the girls at school and teach them something of the laws of domestic hygiene. The immense majority of Indian mothers have never been to school They know nothing about sanitation, elementary precautions against tetanus, dysentery or incipient blindness. They have no fear of dirt, and the midwives who attend them share their ignorance and are held fast by the same bonds of superstitions.

Dr. M. I. Balfour, C.M.O., W.M.S, writes "The *dais* (native midwives) are often old, usually ignorant and always dirty. They have, however, a very high opinion of themselves, resent any interference especially in normal labour, and love to spread alarming reports of the wicked practices of doctors. The women of the country have great faith in these *dais* and cling to them even when trained midwives are available." Thus the organisers of the movement found themselves confronted with twin gints in the path, the absence of any machinery such as elementary schools for reaching future mothers, the apathy and ignorance of the mothers, amounting even to hostility when approached.

Nevertheless the movement is making noticeable progress here and there along its somewhat ragged line of advance. Sporadically, in every province attempts to meet the problem of an appalling infant mortality had been made for ten years or more, when the movement gained impetus and cohesion from the establishment in 1919 of **The Lady Chelmsford All India League for Maternity and Child Welfare**, with its headquarters at Viceregal Lodge, Simla. (Its organising secretary is willing to give information and advice to all inquirers). This League is not intended to supersede provincial efforts, but to act as a Central Agency collecting information regarding child welfare in many centres, both in India and other countries and disseminating the same by every means in its power to those institutions affiliated to it. To this end it published a magazine *Maternity and Child Welfare in India* and undertakes propaganda work such as health exhibitions, lectures, and the formation of new branches.

The most live part of its work so far is the **Training School for Midwife Supervisors and Health Visitors** in Delhi. This school offers an (A) and (B) grade course of training. (A) course is for candidates who have matriculated. (B) course is for candidates who have passed Standard VII. Both grades have one year's training but (A) grade works to a higher standard, that of the Board of Education, Whitehall, and then supervises the work of untrained midwives and *dais*; while (B) grade visits women in their own homes and instructs the mothers and *dais* in child welfare and sanitation. The (A) Class "Midwife Supervisor" is herself a trained and practised midwife. She is employed by the Health Department of the Municipality, or in some cases by a special Infant WelfareCommittee. She is allowed no private practice, or she at once becomes a rival to the *dais*, feared and hated in proportion to the qualities she possesses leading to success. She is a teacher, not a nurse. The school has been at work for three years. So far twelve students, mostly Indian, but in one or two cases European or Anglo-Indian have passed through the course and are now practising in different cities of India. These workers require infinite tact and patience in their work, as the *dais* are independent and suspicious, but gradually they are winning their way, especially among the younger women, partly by little gifts of outfits, clean clothes and occasional treats, partly by their superior skill, which shows the *dais*, that it is worth while to be clean and competent, since, if the babies live, their own reputation and gains are increased. One or two Englishwomen of wide experience and high attainment have settled down, *e.g.*, in Delhi and Lahore to give of their best to the movement. It is clear that their services will have far-reaching results.

Centres of Activity.—The Child Welfare Directory of June, 1921, gives the following list of places where the movement is already at work:

Bombay.—The centre of much active and enthusiastic welfare work; the Lady Willingdon Maternity Homes near the people's chawls being unique of their kind in India. A handsome endowment fund collected under Her Excellency Lady Lloyd will ensure steady advance.

Surat.—The Henderson Ophthalmic Scheme for treating Ophthalmia Neonatorum and stemming "the enormous amount of preventible and curable blindness that is laying its shadow over the health, happiness and usefulness of this great portion of our Empire."

Bijapur.—Mr Henderson, I.C.S., has now started the same beneficent work for blind babies as in Surat.

Dharwar.—

Delhi.—There are four Health Visitors and two Infant Welfare Centres as well as the school already described.

Ahmedabad.—Three Maternity Homes, and five creches in mills.

Calcutta.—Six Midwife Supervisors and six Health Visitors with subordinate assistants and six welfare centres.

Dacca.—

Lahore.—Baby Welcome and 2 English Health Visitors.

Lyallpur.—1 Welfare Centre.

Simla.—1 Welfare Centre and Health Visitor.

Ludhiana.—Much good work under W. C. M. College.

Sudkot.—

Dehra Ismail Khan.—

Lucknow.—Municipal Scheme and Midwife Supervisor.

Agra.—Training of *dais* under Victoria Memorial Scholarship Fund.

Bareilly.—

Shahjahanpur.—

Gorakhpur, Hardwar, Almora.—

Jubbulpore, Nagpur, Bhopal, Kapurthala.

Medak.—

Bangalore.—Creche, two English Health Visitors and 7 Midwives.

So far all the schemes have devoted their attention to combating the prejudices of the mothers in respect of new-born children. In a land of so many languages and superstitions progress will necessarily be slow and India has yet to decide whether she will work intensively and try to rear a few well developed children as far as adolescence or extensively attempt to bring a large number of infants through the first critical months, only to have them perish at a later stage from the many ills that childhood is heir to in a land of great poverty, under-nourishment, epidemics and famine. In Western lands the Child Welfare Movement has no more marked characteristic than its inability to stop expanding. Its ramifications know no bounds its inevitable corollaries are endless, and like the banyan tree it will no doubt in India also develop innumerable fresh roots, medical supervision, dental clinics, better housing, open air playgrounds, etc., etc. But these are not yet. Its preliminary task is to educate the mothers of India to the enormity of allowing two million babies to perish every year and to convince them of the equally important fact that a high death rate always spells also a high damage rate of sickly, under-developed, incompetent citizens.

INDIAN RED CROSS SOCIETY.

When the war first broke out, what is generally termed Red Cross work was undertaken in India and Mesopotamia by the St. John Ambulance Association and by a number of provincial organisations working on independent lines. From August 1916, the central work was taken over by the Indian Branch of the Joint War Committee of the Order of St. John of Jerusalem and the British Red Cross Society. The final report of that Committee shows that up to June 1920 its total receipts amounted to Rs. 1,77,85,716 of which some 17 lakhs had been contributed by the British Red Cross Society. It had spent about 67 lakhs in Mesopotamia; nine lakhs on the Afghan War and Waziristan Expedition; in Mesopotamia and India combined it had spent on Red Cross objects in all about 117 lakhs.

It closed its career in June 1920 under the following circumstances. In the summer of 1919, an invitation had been received to join the International league of Red Cross Societies, having for its object the extension of Red Cross work in the sphere of purely civil activity. Though there was then no formally constituted Red Cross Society in India, the invitation was accepted, thus giving India a distinct position in a world wide League of humanitarian societies. A Bill to constitute an Indian Red Cross Society was introduced by Sir Claude Hill in the Imperial Legislative Council in March 1920, and duly passed into law as Act XV of 1920. This Act handed over the balance of the Joint War Committee to the new Society, and authorised it not only to direct the utilization for war purposes of the capital funds at its disposal but also to devote the interest, as far as possible, for civil purposes. The Act allows the constitution of autonomous provincial societies affiliated to the main Society, and it is with these branches that the task lies of organising and stimulating the new civil activities of the Red Cross throughout India. Provincial Societies have now been constituted in all provinces, except Burma, Central India and Delhi; in Bengal the Society was constituted by a special Act of the Bengal Legislature..

The **objects** on which the funds of the Society may be spent are—

1. The care of the sick and wounded men of His Majesty's Forces, whether still on the active list or demobilised.

2. The care of those suffering from Tuberculosis, having regard in the first place to soldiers and sailors, whether they have contracted the disease on active service or not.

3. Child welfare.

4. Work parties to provide the necessary garments, etc., for hospitals and health institutions in need of them.

5. Assistance required in all branches of nursing, health and welfare work, ancillary to any organisations which have or may come into being in India and which are recognised by the Society.

6. Home Service Ambulance Work.

7. Provision of comforts and assistance to members of His Majesty's Forces, whether on the active list or demobilised.

Constitution.—His Excellency the Viceroy is President of the Society. The Managing Body ordinarily consists of a Chairman to be nominated by the President and 25 members of the Society of whom 12 are the Vice-Presidents nominated by Provincial or State Branches; 8 elected by the Society at the Annual General Meeting from among the members of the Society and 5 nominated by the President.

The present Chairman of the Managing Body is the Hon'ble Sir W. M. Hailey, C.S.I., C.I.E., I.C.S., and the Honorary Secretary Lieut.-Colonel H. Rose, O.B.E., I.M.S.

Finances.—The operations of the Joint War Committee were brought to a close in June 1920 with a capital investment of the face value of Rs. 56,33,000 and Rs. 8,01,509-8-6 in floating and fixed deposit accounts. The Society has since invested further funds in various securities and its finances in July 1921 stood at a capital investment of the face value of Rs. 64,33,000 and about Rs. 65,000 in fixed and floating accounts. The income derived from the capital of the Society (which is 3½ lakhs at present after providing for certain liabilities of the Central Society, is distributable under the Act to the Provincial Branches in proportion to their contributions to the Central "Our Day" Fund. In the year 1920, partly owing to the Central Society's heavy commitments on the North West Frontier, and partly due to the fact that the Provincial Branches had not been fully formed, only a sum of Rs. 32,000 was distributed. In the year 1921, however, 1½ lakh has been set aside for distribution to Branch Societies.

The Tropical Diseases.

This account of the chief tropical diseases was written by Lt.-Col. E. F. Gordon Tucker, I.M.S., of Grant Medical College :—

If the principal scourges of the European in the tropics, namely, malaria, dysentery, and typhoid, could be removed, there would still remain the strain of climate as a source of disease and a cause of deteriorated health, not amounting for a time to actual illness, but eventually showing its effects in lessened resistance to the wear and tear of life, premature senility of the tissues, and diminished fertility This results mainly from the transfer to a hot climate of an individual whose heat-regulating mechanism has previously adapted itself to conditions where the body temperature has to be maintained some 40° above that of the surrounding air. On arrival in a country where the temperature of the air is perhaps the same as that of the living tissues, it is obvious that there must be a sudden and violent disturbance of such mechanism. This mechanism is very complex and exists for the purpose of striking a balance between the heat formed by the changes in the tissues, and the heat lost from the lungs and by radiation from the surface of the skin. But beyond this there is no doubt a regulation of the temperature dependent in some way on the normal working of the central nervous system, as is shown by the remarkable alteration which may take place in the temperature of parts of the body when the brain has been subjected to some gross lesion.

In the tropics the amount of carbonic acid given off by the lungs is reduced about twenty per cent., the number of respirations per minute is reduced, and there is lessened activity of the lungs. This shows that there is less tissue change (or combustion) going on in the tissues, that is to say, diminished heat-production. The same is shown in the diminished amount of work done by the kidneys. As regards heat-loss, this is almost entirely effected through the skin, 70 per cent. of the heat of the body in temperate climates going off by radiation and conduction, and 15 per cent. by evaporation. When however the temperature of the tropical atmosphere rises, the loss by radiation falls to nothing, and all the heat has to be dissipated by evaporation from the surface. Consequently, practically all the work of losing heat, which strikes the balance with the heat production and maintains the body at a normal temperature, falls upon the sweat glands which are therefore in a state of continued and abnormal activity. In hot dry atmospheres the water evaporates as soon as formed, but in conditions of heat with great humidity, such as obtain during the worst months of the year in Calcutta and Bombay, the skin is kept continually moist by trickling beads of perspiration. Herein lies the comfort and healthiness of the punkah which removes excessive moisture. But it is obvious that in order to keep the temperature of the body normal there must be increased flow of blood to the surface of the body, a state quite different from the conditions under which the organs of the European have been trained. This favours those sudden chills to which Europeans are so subject, and acts prejudicially to the working of the internal organs, especially those subserving digestion. A blast of cold air coming on the congested skin in the early hours of the morning must chill the surface, causing a sudden contraction of the cutaneous vessels, and tending to produce a rapid flux of blood to the deeper parts, inducing a congestion of the mucous membrane of the bowels, and from that results the "morning diarrhœa" which is occasionally severe and exhausting. Such a state of affairs may become chronic, and so lead up to one of the climatic diarrhœas which are a frequent cause of invaliding. Moreover a sudden congestion of the liver and spleen in a person who has had malaria, may be followed by a malarial hepatitis or splenitis, and repeated attacks of these conditions may result in permanent enlargement of these organs; or at any rate, in the case of the stomach and liver, to derangement of function and so to chronic dyspepsia or insufficient manufacture of bile.

Again, the chronic hyperæmia of the skin favours the development of fungi and microbes. Hence the existence of ringworm of various kinds from which Europeans frequently suffer. There are microbes which, even in temperate climates, are found within the layers of the skin or on the surface. On account of the chronic congestion and moisture of the skin in tropical climates these microbes not only become abundant but virulent, and hence the BOILS which are often a serious affliction in the hot months. We frequently come across most distressing cases where the patient is covered from head to foot with them. When the boil comes to a head and softens it is easy to afford relief by opening each, and so relieving tension, but the worst kind is the "blind boil" which forms as a hard red mass, intensely painful and not coming to a head, and here an incision gives little relief. Until lately these cases were very unsatisfactory to treat, and patients would recover after weeks of pain and much reduced in health. Fortunately we have in the vaccine treatment a most successful method, the vaccine used being either a stock one and generally acting like magic: or, in a small percentage of cases requiring to be made from the boils themselves. In still other cases the infection of the skin causes the formation of CARBUNCLES, which are more serious but require treatment on the same lines.

Another more common condition resulting from the congestion of the skin is PRICKLY HEAT. This results from acute inflammation about the sweat glands and distention of their orifices, producing red papules and little vesicles, the site of intense itching. The trouble is believed to result from the proliferation of a particular microbe in the skin, which alters the reaction of the perspiration. Be this as it may, inoculation of the skin is likely to take place through scratching, and so to the formation of boils. In some cases the skin is so intensely inflamed that the region of the shoulders and neck feels like leather, or the surface gives the impression of sand-paper. It is a serious condition in young infants, as

the irritation prevents sleep, interferes with digestion and so promotes diarrhœa, so that this simple malady may be the starting point of a dangerous illness. Flannel next to the skin should be avoided in the hot weather as it is so liable to start the irritation. A good lotion consists of two teaspoonfuls of Eau-de-cologne in ten ounces of a 1 in 2000 solution of perchloride of mercury, dabbed on the skin and allowed to dry: followed by dusting with equal parts of boric acid powder and talc.

To avoid the heat the European flies to the punkah. The electric punkah has been one of the greatest blessings introduced during recent years into Indian towns as its use insures a good night's rest in place of the weary hours of sleeplessness which formerly wore out the temper and the mental energy of the European during the hottest months. Still this blessing is not without its attendant dangers. Most common are attacks of muscular rheumatism, sudden internal chills causing diarrhœa, attacks of colic, ordinary nasal catarrh, and sometimes bronchitis or pneumonia. The electric punkah does away with the mosquito curtain, which does not conduce to the free circulation of air, and gives good ventilation in its place.

Finally, we have the effects of a continued high temperature on the working of the nervous system. As has been remarked by the late Lt.-Col. Crombie, I.M.S., (in a valuable paper on "The measure of physical fitness for life in the Tropics," to which the writer is much indebted). "In the tropics there is going on continually and unconsciously a tax on the nervous system which is absent in temperate climates. The nervous system, especially those parts of it which regulate the temperature of the body, are always on the strain, and the result is that in time it suffers from more or less exhaustion." The mean temperature of a European in India is always about half a degree higher than it is in a temperate climate, and it may be raised to 99° or 100° after severe bodily exertion. When, under the strain of a severe hot moist and sultry season, the heat-centre gives out, or as it is said is "inhibited," we have all the serious phenomena of HEAT STROKE. But in the less marked but long drawn out process of nervous exhaustion we have the common tropical effect of deficient mental energy, generally commencing with unnatural drowsiness or loss of appetite and a yearning for stimulants, which culminate in that lowering of nerve potential which we know so well as NEURASTHENIA. This nervous disturbance due to climate is likely to be most marked, as Crombie points out, in two classes of persons, namely those who suffer from obesity, and those who are members of families which may be designated as "neuropathic," that is whose nervous systems are naturally unstable. To these may be added persons with naturally defective digestion and those who have a predisposition to gout.

To sum up, it will be seen that the effects of long residence in the tropics are real and permanent, not only in the direction of lowered bodily health, but in undue wear of the nervous system, which may not only be apparent during active service in duties involving strain, anxiety or responsibility, but also after retirement; so that the chances of longevity of the retired Indian official are not up to the normal, and the "extra" which the Insurance Office puts on such lives is not only to cover the risk incidental to life in the tropics, but also the diminished vitality of those who have survived to enjoy their pension and ease.

But there are other Indian risks, and these are most likely to affect traveller, due to the effects of heat on food. Microbes multiply with profusion in milk, and decomposition is liable to occur in meat within a very short time after killing. Milk should always be boiled; and owing to the dirt in railway dining-rooms, and in many hotels, and the carelessness of the lower type of native servant employed therein, it would be better to rely on tinned milk or on a supply of Horlick's milk tablets, when travelling long journeys by rail and in the smaller towns. Beef should never be eaten underdone, as it is a prolific source of tape-worm in India. There is also liability to contamination of food by flies and dust. Indian cooks, though among the best, have little regard for sanitation, and consequently the state of the cook-house should be carefully supervised.

MALARIA.

Attacks of malaria, dysentery, and enteric represent the principal risks to the European travelling in India. Malaria is the commonest cause of fever in the tropics and subtropics, but the risks therefrom have been greatly diminished by our complete knowledge of its causation which now permits an intelligent prophylaxis, that is, taking adequate precautions against infection. The connection of certain kinds of fever with marshy soils has been recognised from ancient times, whence its old name of paludism; and the word "malaria" itself implies the belief in the existence of an emanation of poisonous air from the water-logged ground. It is now realised that the poison is conveyed solely by mosquitoes, and by the anopheline species. There are only a few of the many anophelines which carry malaria, but all are to be regarded as dangerous.

The parasite of malaria is a delicate jelly-like body which invades the red cells of the blood, and lives at their expense. It has two life-cycles, one within the blood of the human host, (endogenous and sexual), the other in the stomach and tissues of the mosquito (exogenous and sexual). But the first part of the sexual cycle is prepared for in the blood of the human host.

If the blood of a patient be taken about an hour before the occurrence of the "rigor," (the shivering-fit which marks the commencement of the attack), and examined in a thin film under a high power of the microscope, some of the red corpuscles will be found to contain bodies composed of delicate proto-

plasm showing minute granules of dark pigment in their substance. These bodies are the parasites. The granules represent the result of the destruction by the parasite of the red colouring-matter of the blood-cell. The latter consequently appears paler than natural and is enlarged. In the parasite of the so-called benign tertian fever, if the blood be again examined when the rigor is commencing, the little mass of jelly is found to have divided into from twelve to twenty minute spheres still held together by the remains of the degenerated red cell, and with minute masses of pigment in the centre. Later the group of spherules has burst through the envelope that held them, and has appeared free in the blood-fluid. Many of these free spherules are attacked and absorbed by the phagocytes, but those which escape destruction effect their entrance into other red blood cells and go through the same process of sexual division, taking forty-eight hours for the process. On the time taken for this cycle to occur depends the periodicity of the fever, the attack appearing every third day, whence the name tertian fever. Another variety of malarial parasite, not very common in India, takes seventy-two hours to complete its cycle, hence called the "quartan" variety.

There is also a third kind of parasite called the "malignant tertian," called by the Italians the aestivo-autumnal parasite, which also takes forty-eight hours to go through its cycle, but which gives rise to a more irregular fever, and has more pernicious effects on the system and is also liable to produce severe nervous symptoms, such as unconsciousness, often ending in death with very high fever. Each kind of parasite has its special characteristics which can be observed by microscopical examination. Consequently expert examination of the blood is always advisable in cases of fever, not only to show that malaria is present, but also to distinguish the particular kind which is causing the trouble.

Within the blood there also appears the first stage of the sexual life of the parasite in the shape of male and female elements, which result from some of the parasites which do not undergo the usual segmentation described above, and which exist for the purpose of allowing further development in the non-human host, which in the case of this particular parasite is the mosquito. These sexual elements are especially in evidence in the blood of cases of the pernicious variety of malaria, in the form of crescentic bodies which obtain considerable protection from the phagocytes, and many therefore persist for some time in such blood. "Crescents" appear only in malignant fevers, and persons who harbour them are of course a danger to the community, inasmuch as the mosquitoes of the locality are infected from them, thus rendering such village or street unhealthy from malaria.

The sexual elements of the malarial parasites when taken into the stomach of the mosquito which sucks up the blood of its victim, undergo certain changes, the male element extruding flagellate or hair-like processes which fertilise the female. The latter thereupon changes into a body endowed with the property of locomotion, which makes its way into the coats of the stomach of the insect, and becomes divided up into a vast number of minute cysts, each of the latter becoming packed with minute rod-like bodies. The cysts rupture into the body-cavity of the mosquito, and the rods, thereby set free, become collected within the substance of the salivary glands, and ultimately make their way to the base of the proboscis. On such an infected mosquito pushing its proboscis into the human skin when it wishes to draw blood some of the rods are injected into the blood stream. They then enter red blood corpuscles and go through the various cycles described above.

From three to five days, or as long as a fortnight, after being bitten by such a mosquito the patient has an attack of fever, sometimes preceded by pains in the limbs, headache, and malaise. This is soon succeeded by a feeling of intense chill, perhaps associated with vomiting. The skin becomes cold and blue the shivering is excessive and prolonged, constituting the "rigor" stage. In this state the patient is in great distress, and obtains little sense of relief from the blankets which he heaps up over himself. Although the surface of the body is very cold, the temperature, taken in the arm-pit or mouth, shows a rise to 103° or higher. In a quarter of an hour or more the "hot stage" comes on, the face becoming flushed, the surface of the body red and warm, the small quick pulse becoming full and bounding, and perhaps the patient complains of throbbing headache. He remains thus for a few hours and then occurs the "sweating stage," perspiration breaking out about the head and face, and soon extending to the whole body. Great relief is experienced when this is entered on, and is likely to be followed by a refreshing sleep. During the paroxysm the spleen is often enlarged and may be the seat of considerable pain. There is also often troublesome cough from a concomitant bronchitis. With repeated attacks the enlargement of the spleen is liable to become permanent, the organ coming to form a large heavy tumour with special characteristics, the so-called "ague cake," which is common among the children of malarious districts. Europeans who suffer from severe or repeated malaria are likely to suffer from permanent ill-health in the shape of anæmia, dyspepsia, or easily-induced mental fatigue.

Treatment.

The traveller in India should endeavour to guard himself against the bites of mosquitoes. This can be done to a great extent by the use of mosquito curtains, the mosquito seeking the blood of its victim mainly at night. But when travelling by train protection is difficult. There are some odours which mosquitoes appear to dislike. Sprinkling the pillows with lavender water is sometimes efficacious, or smearing the hands with lemon-grass oil. Camps should not be pitched in the neighbourhood of native villages, if it can be avoided. Travellers should provide themselves with thermometer and a supply of quinine tabloids.

During the cold stage the patient should be well covered, and hot fluids administered, unless vomiting is present. Quinine should not be taken in this stage as it increases the distress. A diaphoretic, or sweating mixture, should be administered every two or three hours until the skin becomes moist, and throughout the hot stage: this soon gives relief, and when the stage of perspiration has been reached, the grains of quinine should be given, and repeated in five grain doses every six hours until the temperature becomes normal. Thereafter the drug should be continued for a few days in doses of five grains twice a day. This is calculated to ward off a second attack, or, at any rate, to reduce its severity and prevent a third. If there is vomiting, quinine tabloids are not likely to be digested and absorbed; in such cases the drug should be given in a mixture dissolved in a dilute acid. The advantage of quinine tabloids is that the unpleasant taste is avoided.

There are some severe continuous malarial fevers which appear to resist the action of quinine. These are the pernicious tertian fevers, which so often cause difficulty in diagnosis inasmuch as for a few days they may suggest enteric fever, especially to those inexperienced in tropical diseases. In such cases large doses of quinine are required, the skin being kept moist meanwhile by a diaphoretic mixture. Some of these fevers last for a week or longer, but the majority of them yield to quinine in three or four days. It is in such that an early examination of the blood is so useful. In certain cases of profound malarial poisoning or where, for any reason, quinine does not appear to be acting when administered by the mouth, recourse must be had to the injection of quinine into the tissues. This should always be done by a skilful physician, and with special precautions, as some cases of tetanus have occurred after quinine injections taken from stock solutions, even when apparently given with every care. The "vaporoles" prepared by Messrs. Burroughs Wellcome & Co., which consist of little glass capsules containing preparations of the drug dissolved in sterile and non-irritating fluid, appear to be absolutely devoid of risk and are very efficacious.

TYPHOID FEVER.

By Typhoid or Enteric Fever is meant a continued fever, lasting for three weeks or longer, due to the entrance into the intestinal canal of a particular bacillus (the typhoid bacillus), which not only produces serious abdominal trouble but also symptoms referable to a generalised infection of the blood by the bacillus and the poisons which it engenders. Formerly the scourge of the British Army in India, especially among the younger soldiers, it has been reduced to a very low point, through the prophylactic use of Sir Almroth Wright's vaccine, continuous attention to the sanitary condition of the soldiers' quarters, improvement of water supplies, and skilful medical treatment.

"Paratyphoid" is a term applied to certain fevers which have all the characters of typhoid, but with a rather lower mortality, and which are due to infection by bacilli which are closely related to the typhoid bacillus.

The fact that typhoid more frequently attacks the new arrivals to the tropics renders this disease one of the risks which tourists have to face, but this can be minimised by knowledge of the manner in which the typhoid bacillus affects an entrance into the system.

Typhoid Fever has now been shown to be a common affection among Indians, contrary to what was held some fifteen years ago. In Bengal and the Punjab, according to Leonard Rogers (Fevers in the Tropics), the maximum of cases for all classes occurs during the hot months, while the maximum for Bombay is in the rainy season. But taking the European cases only he finds that the largest number of cases falls within the dry, cold and hot seasons, and considers that this is due to the European being most frequently infected through contaminated dust this class of person paying greater attention now-a-days to the condition of the water which he drinks: unlike the Indian who will drink water out of the nearest tap.

As is well known, infection of typhoid is most commonly produced by contamination of drinking water. Great care is therefore necessary in boiling and filtering drinking water and in protecting the vessels in which it is kept from contamination by dust. In the neighbourhood of all native villages the soil is laden with animal dejecta which, of course, is very likely to be associated with disease-producing microbes. Hence infection of the food in cook-houses and shops is easily produced by the wind carrying the dust from latrines and other foul areas. Uncooked vegetables produced from gardens watered by sewage-containing fluid are also very dangerous, and should be avoided by the Indian traveller Lastly oysters taken from estuaries which receive rivers laden with organic matter from the villages on the banks are believed to afford special protection to the typhoid bacillus, and when eaten raw are dangerous.

In many cases the onset of the disease is sudden, with headache, shivering and vomiting; but in a little less than half the onset is insidious, the patient being out of sorts, slightly feverish, perhaps with occasional looseness of the bowels, loss of appetite and a little sickness. He ultimately takes to his bed, generally dating the commencement of his illness from this event, and there forthwith begins a period of at least three weeks of anxiety for his friends and relatives, inasmuch as enteric fever, as seen among Europeans in India, is characterised by its greater severity and longer duration. The temperature rises gradually day by day during the first week, remains at a fairly constant high level during the second, becomes

irregular with daily remissions during the third, and in the majority of cases is succeeded by a period of convalescence, during the first part of which the greatest care in dealing with the patient is required. The bacillus produces its most important effects on the lower portion of the small intestine, certain glandular structures in the wall of the bowel becoming inflamed, enlarged, and finally ulcerated. It is on the formation of these intestinal ulcers that many of the worst complications depend. The ulcerative process favours, first a looseness of the bowels, later an exhausting diarrhœa. Moreover the destruction of some of the coats of the bowel may open up an adjacent blood vessel and produce alarming or even fatal hemorrhage. And again the whole thickness of the bowel may be perforated, causing death from collapse and peritonitis. This is the danger which the physician has in view throughout the case. It can only be guarded against by the most careful nursing and attention to the dietary. Other dangers are bronchitis and failure of the heart, especially during the third week. During the stage of convalescence the same care has to be taken with the dietary as the ulcers are undergoing healing, and an error might lead to the rupture of one of them when all danger may well be expected to have passed. Finally, owing to the depressing effects of climate, convalescence is often attended with prolonged mental depression.

In the matter of treatment it is absolutely essential that the patient should have the benefit of skilled nursing. Fortunately highly-trained European nurses can now be obtained from any populous centre, though occasions arise when the demand exceeds the supply. If possible two nurses should be obtained for day and night duty respectively. Unless it is absolutely necessary to remove him, the patient should be nursed where he falls ill and not sent long distances by train. At the most he should travel to the nearest large town where there is a Civil Surgeon. Treatment mainly consists in keeping the fever within bounds, and thereby sparing the strain on the heart which is great during the three weeks of continued fever. This is effected in great part by the system of hydrotherapy, that is, treating the patient by continued tepid baths or by frequent sponging with tepid water to which a little toilet vinegar should be added. There is no special drug which is of any use in aborting the fever, but this does not mean that drugs are of no use in typhoid. On the contrary the complications, which are many, will be detected as they arise by the careful physician, and there is no disease which tries more than this the skill of the doctor and the care of the nurse, who will frequently bring to convalescence what seems to be an almost hopeless case. Abdominal distension, for instance, is a frequent and serious complication in Indian typhoid, and should be treated as soon as detected. It results partly from the decomposition of the intestinal contents, partly from loss of the muscular tone of the bowel. It hinders the respiration and the action of the heart, and favours the occurrence of perforation. Diet consists almost entirely of milk, either pure, diluted with barley water or whey, or as a jelly.

Lastly a word should be said about the importance of typhoid inoculation to those intending to travel in India or the tropics. It is better to have Wright's prophylactic vaccine injected before leaving home, but if this is not done, it should be submitted to on arrival in Bombay. In the majority of cases the only discomfort resulting is a little passing tenderness at the site of inoculation: in some cases there are a few hours of fever: and in the worst the patient feels out-of-sorts for twenty-four hours. The inoculation (with a larger dose) should be repeated on the eighth day. Attention to this small precaution as a routine measure would obviate most of the catastrophes which we witness on occasions among "globe-trotters" who have come to the country for pleasure or health.

DYSENTERY.

The term Dysentery is applied to several forms of infective inflammation of the large bowel, in which the principal symptoms are griping, abdominal pain, frequent straining, and the passage of a large number of evacuations characterised by the presence of blood and mucus. The changes which take place occur in the mucous membrane of the large bowel, and are first an acute catarrh succeeded by ulceration more or less extensive, and sometimes going on to gangrene.

The disease is endemic in India, and is in fact common in Eastern countries, and in Egypt. It is liable to arise in epidemic form especially among armies in the field. It is caused by a contaminated water supply, and by the infection of food by dust and flies. Dysentery is probably caused by several varieties of micro-organisms but for all practical purposes may be said to be divided into two great groups, one due to the amœba of dysentery, and the other caused by a bacillus described by Shiga and known as bacillary dysentery. The latter form is more common in Japan and in the north-eastern side of the Indian peninsula; the amœbic form being that most commonly seen in the Bombay Presidency. The bacillary form is characterised by the presence of a very large number of evacuations perhaps as many as a hundred or even more in the twenty-four hours. In the amœbic form there are seldom more than twenty evacuations in the day, and there is less fever and general depression than in the bacillary variety. In the amœbic form there is greater tendency to thickening of the bowel wall, and to the dangerous complication or sequel of abscess of the liver.

After a few days of severe illness should the patient recover there is a danger that the disease may become chronic, a condition which is associated with emaciation and profound

weakness. The chronic form is also more likely to eventuate from the amœbic type.

The frequency with which it attacks Europeans in India may be judged from the admissions of the European soldiers into hospital, the figures of admissions for each of the years 1910 and 1911 being 7·7 per thousand of strength.

The treatment of the bacillary form with an anti-dysenteric serum has had good results. In the amœbic form most Indian physicians still rely, and rightly so, on the use of ipecacuanha. This has to be given with particular precautions and with a previous dose of opium to diminish the liability to vomiting. Recently, thanks to the work of Leonard Rogers, a valuable drug has been placed in our hands, in the form of emetine, an alkaloid derived from the ipecacuanha root; and which when injected into the deeper layers of the skin, gives all the good results of ipecacuanha without its unpleasant effects. It is of special value in the case of children in whom acute dysentery is a very serious disease. We have hereby obtained one more efficient weapon in the contest with one of the common diseases of India.

ABSCESS OF THE LIVER.

There are several varieties and causes of abscess of the liver but the term is applied in India to the single abscess which frequently forms as the result of amœbic dysentery, the latter generally preceding but sometimes being concomitant with the formation of the abscess. It is one of the scourges of the European in India, and is especially to be dreaded on account of the high mortality. Taking all the cases together, including the acute and chronic and all classes of the community, the death rate is about sixty per cent., but this will probably be reduced by recent improvements in the methods of diagnosis and treatment. The latest annual report of the Sanitary Commissioner with the Government of India states that next to enteric fever, hepatic abscess is the most frequent cause of death among European troops, but the admissions and deaths on account of it have decreased greatly during recent years. The report also notes that the decrease in the number of cases of liver abscess is coincident with an equally steady fall in the number of admissions to hospital for alcoholism.

The disease is most liable to attack those who, in addition to having had an attack of dysentery, have indulged, not necessarily to excess, in alcohol and general good living, and are at the same time somewhat sluggish in their habits. It is often preceded by continued fever, malaise, dyspepsia, and more or less uneasiness in the liver region, or the latter organ may be acutely enlarged and very tender, in many cases the exact diagnosis is often a matter of anxiety, but greater precision is now possible as we have come to recognise what Rogers has called the presuppurative stage of amœbic hepatitis, which is very amenable to treatment by ipecacuanha or injections of emetine. The use of this method will often prevent the case going on to the dangerous condition of abscess, which when it has once definitely formed can only be dealt with by prompt operation, which in itself has a high mortality. Further aid is now obtained by special examination of the blood and by the use of the X-rays, which will often clear up a doubtful case.

The abscess generally forms in the right lobe of the liver. Should it form on the left side it is especially liable to rupture into one of the internal organs.

The same complication may eventuate when the abscess forms on the right side. Here the principal point of rupture is into the right lung, the contents of the abscess being suddenly evacuated, in some cases without much warning, and nature thereby effecting a cure. Such a termination however is not desirable as healing will take place quicker by surgical means.

There are some abscesses which are exceedingly insidious, it often happening that patients are sent home with a fever associated with general loss of health and weight, where the existence of a deep seated abscess may not even be suspected, but in which the symptoms of hepatic abscess suddenly occur and clear up the case: or the correct diagnosis may obtrude itself by the sudden rupture as above described.

PLAGUE.

Plague is a disease of very great antiquity; its ravages and symptoms have been described with remarkable accuracy by the old historians, such as Procopius. Not many years ago it appeared to be a disease of historical interest only, but the present pandemic, which commenced about 1894, has made it a subject of the greatest importance to the inhabitants of the British Empire. It was in March 1894 that it first became prominent in Canton, and thereafter it spread to Hongkong, Macao and Pakhoi, and so along the whole of the Southern China Coast. It probably arrived in Bombay in March 1896, but it was not until the end of September that it became noticeable in that part of the native city known as Mandvi, in which the great grain supplies are collected, and wherein consequently there is an enormous rat population. In October of the same year the presence of the pestilence was officially acknowledged. Everything which the limited knowledge of the subject at that time suggested, was done to check its spread; but, in spite of all efforts, the pestilence spread from the infected city throughout the greater portion of the Peninsula, and while its ravages of late years have not been so terrible as at its first appearance, yet the disease still takes its annual toll of human life, and it has

apparently become one of the endemic diseases of India. According to the official figures Plague since its appearance has been responsible for more than seven and a half million deaths within the limits of the Indian Empire These figures should perhaps be increased by about fifteen to twenty per cent., due to defect in the registration of the causes of deaths and also to the fact that the disease often simulates other maladies for which it is likely to be mistaken by an uneducated population.

Plague is an acute infection of the blood by a bacillus which was discovered by Kitasato in Hongkong in 1894. It generally affects its entry by the skin, on which it is deposited by the rat-flea. At the site of deposit a small pustule is occasionally found which soon forms a superficial ulcer. In such cases inflammation and distention of the lymphatics may be noticed running from the neighbourhood of the small and painful ulcer to the nearest group of glands. These will be found to be enlarged and exquisitely tender, the tenderness being out of all proportion to the size of the glandular enlargement and to the amount of local inflammation. This glandular enlargement is called the Bubo, which has given the name to the most common form of the pest—Bubonic Plague.

With the appearance of the Bubo, or even a day or so before it, there is evidence of a general infection of the system, in the shape of extreme prostration, mental confusion, a furred tongue, and fever which is generally high. The pulse is accelerated, and while at the outset, especially in full-blooded muscular adults, it is likely to be full and bounding, there is sooner or later, generally soon, evidence of early failure of the strength of the cardio-vascular system. The pulse becomes quicker, smaller, and the heart sounds feeble. As the case progresses, the primary ulcer will enlarge and become of an angry appearance, the Bubo will also enlarge and the tissues around the inflamed lymphatics will be swollen and œdematous. To this variety the term "cellulo-cutaneous plague" has been applied. The spreading ulcer, which is really a local gangrene, has been described as the plague "carbuncle"; these forming on the skin of those affected were often referred to by old historians as a prominent feature in many ancient epidemics.

These cases however are somewhat uncommon. The usual variety met with is the Acute Bubonic Plague. In this the patient is attacked with fever, and all the general symptoms of an acute infection, and on the first, second or sometimes the third day of the illness the characteristic bubo appears. The common site is among the glands of the groin, for the reason that these glands receive the lymphatics from the lower limbs and from the lower portion of the trunk up to the level of the navel, a larger area than that drained by any other group of glands. Other sites for Bubo formation are the arm-pits, the glands of the neck, those about the angle of the jaw and below the chin, and very rarely the little gland on the inner side and just above the elbow, and the small glands behind the knee joint. In some cases, generally in association with Buboes in the groin, the deep glands of the abdomen can be felt to be enlarged.

These Plague Buboes are of different kinds and it is a matter of some importance in connection with treatment and the outlook as regards recovery, to recognise the type of Bubo present in each particular case. The common variety is the "softening bubo." The enlargement increases somewhat rapidly and the hard swelling gives place to a soft doughy mass around which is a limited amount of serous effusion into the subcutaneous tissues. If the patient lives till the fifth day or thereabouts this bubo will feel like a tightly stuffed pincushion, or may give the experienced examiner the signs that the contents are of a fluid nature. On incision, pus and shreds of the disorganised gland will be evacuated, and under suitable treatment the cavity, though large, will heal up within a week or so. When these softening Buboes are allowed to rupture spontaneously a large foul cavity is produced; such are not unfrequently encountered among the poor, who have not received adequate attention during the stress of a plague epidemic.

Another variety of bubo obtains when the glands inflame and harden, the inflammation being so acute that the blood supply of the part is obstructed and the whole of the affected area sloughs out, leaving a large superficial ulcer of a very unpleasant appearance. These buboes are found where the inflamed glands are bound down beneath tense tissues, as in front of the ears and in the region of the groin. To this kind the term "indurated bubo" has been applied. Another variety the "œdomatous bubo" occurs in the neck and the arm-pit and in them the serous effusion into the tissues around the glands, present to a less extent in the common type is the essential feature. The whole arm-pit or the side of the neck may be distended by the accumulation of fluid under the skin. It is an extremely distressing kind of bubo, as the pain is great and nearly all the patients die. Also there is a rare kind the "hard late bubo," which appears after about a fortnight in cases simulating typhoid fever, and lastly there are some soft buboes which abort and shrink with the rapid subsidence of the fever—the "shrinking bubo." The fever continues from the outset with slight emissions; it is generally about 103° to 104°, but it may rise to a great height from almost the initial rigor. On the third day the temperature tends to approach the normal, and almost immediately rises again. Should it rise to a point above that of the maximum temperature preceding the remission the outlook is bad; but in cases which are likely to do well it rises to a point which is less than that of the preceding maximum, and after about three days gradually falls to normal, with slight daily oscillations depending on the amount of the suppuration in the buboes and their local condition.

It is to be understood that this disease is of such great virulence to human beings, on account of the early appearance of the plague bacillus in the blood-stream, that there are many instances in which death occurs before the bubo has had time to undergo the changes described above or even to form. The more acute cases are also liable to be a typical in their mode of onset. Some are taken with a wild delirium in which they are likely to attack those about

them, others suffer from vomiting of blood followed by rapid failure of the heart and death: pregnant women miscarry and practically all of them die; and lastly there are cases where the general and local symptoms are slight and yet failure of the heart may suddenly ensue within a few hours of the onset. These so-called "fulminant" cases are generally met with at the commencement of every epidemic: in some of the descriptions of mediæval epidemics they seem to have been in the majority, and it is on account of these that plague epidemics appear so terrible to the occupants of the plague-stricken town. Fortunately, however, there is a large majority of cases which allow some scope for medical skill. The condition of the patient after the full development of the symptoms is always one which gives rise to great anxiety. The mental condition becomes dulled, which, while it mitigates considerably the distress of the sufferer, is nevertheless an indication of the action of the plague poison on the nerve centres. The eyes are suffused and often acutely congested. There may be cough, which is a bad sign as it indicates either a secondary pneumonia or the onset of an acute bronchitis, the direct result of the failure of the heart. If the latter progresses the breathing becomes more rapid, the pulse weak and almost uncountable at the wrist, the skin cold and clammy, and towards the end covered by profuse perspiration: finally, the breathing becomes irregular, and after several long-drawn gasps the patient breathes his last.

In other cases however improvement starts about the fourth day, the temperature gradually falls, and the mind clears: the bubo suppurates in due course and heals up, and the patient passes into a slow convalescence, but which is sometimes retarded by the formation of chronic abscesses, boils, attacks of heart failure or of palpitation: or ulcers of the eyeball with infection of the whole globe and consequent loss of sight. Some recover with permanent mental enfeeblement, or persistent tremors of the limbs with difficulty in speaking with clearness.

Septicaemic Plague.

This term is applied to certain forms of acute plague where buboes do not form, or where there is uniform but slight enlargement of glands in various parts of the body with symptoms of a general blood infection. The term is misleading, inasmuch as most cases of acute bubonic plague are really septicaemic from the outset. These cases are either acute, ending fatally about the third day or sooner: or are sub-acute, with symptoms simulating typhoid fever, ending fatally in about a fortnight. In the acute cases large dusky patches of blood-effusions beneath the skin, the so-called plague spots, are sometimes found; and there may be hæmorrhages from the stomach or bowels.

Pneumonic Plague.

In this variety the plague bacillus proliferates in the lung and causes rapid consolidation of large patches of the lung tissue scattered irregularly throughout the organs; with a considerable amount of œdema, so that the lungs are engorged with blood, are large and heavy, and the bronchial tubes filled with reddish frothy fluid which contains the plague bacillus in almost pure culture. The fever is very high and the interference with respiration immediate, and death occurs from the second to the fourth day. A curious fact about pneumonic plague is that one such case is liable to give rise to others of the same type.

Treatment of the Disease.

No serum or antitoxin has so far proved of value in diminishing the mortality of the sick. Much can, however, be done by medical treatment. Absolute rest is required and the patient should not even be allowed to sit up in bed. Drugs which act as heart stimulants are required almost from the outset, and frequently these have to be administered by the skin as well as the mouth. The buboes should be fomented till they soften, and incised as soon as fluid is formed. For the pneumonic condition the administration of oxygen gas gives relief. This can be obtained in India without much difficulty. Careful nursing is essential, and fluid nourishment must be given regularly in an easily assimilable form, and complications have to be met as they arise. As regards prophylaxis by means of Haffkine's Plague prophylactic which is manufactured in enormous quantities at the Bacteriological Government Laboratory at Parel, it may be said that its use gives a threefold chance of escape from attack and a reduction of case mortality by fifty per cent.

DENGUE FEVER.

Dengue fever, otherwise known as Dandy fever or Breakbone fever, is rather common in India and is generally present in the larger towns, but as it appears in manifold forms and various writers describe it differently, its identity is not always recognised; and, therefore, by many medical men is thought to be less common than it really is. On occasions it gives rise to very wide-spread epidemics. In 1902 there was an extensive epidemic on the eastern side of the Indian Peninsula, and quite recently there has been a bad outbreak in Calcutta. It is more common during the rainy season.

The onset is abrupt, with fever, slight sore throat producing cough, rapidity of the pulse, sometimes a red rash which is so fugitive that it is often overlooked, and intense pain. These pains constitute the patient's chief complaint. They are generally pains in the bones, or in the small of the back, or in some of the joints either large or small. Sometimes there is no complaint of pain in the limbs, but there is intense pain behind the eyes. The fever lasts for three or four days, during which in rare cases there may be further symptoms due to the appearance of a pleurisy or even a pericarditis Sometimes there is intense shooting pain into the little finger. Though the intensity of the symptoms may give a very serious aspect to the case, yet a fatal issue is almost unknown. After the

four days of intense suffering the fever subsides somewhat abruptly, and at about this time a second rash appears, most marked over the shoulders and neck, and on the backs of the arms, or else an universal rash. It is of a dark red colour, often very like the rash of scarlet fever, or it may be like that of measles. With its appearance the more severe symptoms subside. During convalescence the patient is much depressed, and the pulse remains unduly rapid. Sometimes also pain starts again in one of the joints, or he is crippled by stiffness of the back or of several of the joints. After a shorter or longer period, from two days to ten, a second attack of fever and pain comes on which runs the same course but as a rule less severe and prolonged; in very rare cases there is a third attack.

There is no drug which will cut short the disease. From its likeness to rheumatism the salicylates are generally used, and perhaps relieve the pains. This drug should be combined with an ordinary fever mixture: large doses of bromide should be given for the headache, and the excruciating pains must be treated with morphia.

It is often impossible to distinguish the malady from influenza until the appearance of the rash.

It is believed that the poison is conveyed by the bites of a mosquito, and that this poison has characters which are analogous to the virus of Yellow Fever.

CHOLERA.

This is one of the most important diseases of India, having been endemic therein for many hundreds of years. It is always present in the country, and sometimes extends over large districts generally from some crowded centre such as the site of a pilgrimage, from which it is dispersed over the country-side by the returning bands of pilgrims. The deaths in British India from this disease in 1911 numbered three hundred and fifty-four thousand and in the following year four hundred and seven thousand. The disease is of special importance to the numerous pilgrims both on going to and returning from Mecca.

It is essentially a water-borne disease and the exciting cause is the "comma bacillus" discovered by Koch, so called from its shape when isolated and stained. The dejecta of a person suffering from the disease, when contaminating the soil, are liable to get washed by the rains into some water-supply, which may become the source of almost unlimited infection. Such contaminated drinking water is rendered innocuous by boiling, or filtration through a Pasteur-Chamberland filter. The importance of Koch's discovery, therefore, lay in the recognition of the fact that the poison was essentially water-borne. It can also be conveyed by flies settling on food.

The disease has an incubation period of from two to seven days. After a premonitory diarrhœa with colicky pains lasting for half a day or longer, the nature of the illness is announced by violent purging and vomiting, the former having the peculiar character of rice-water. The poison may be so intense that death takes place before the purging appears, the so-called "cholera sicca." In the common form collapse is early and marked, the extremities are blue and cold, the skin shrunken, the heart weak, the surface temperature below normal, though the temperature taken in the mouth shows high fever to be present. There is a curious pinched expression of the face with deeply sunken eyes, and the patient endeavours to communicate his wishes or fears in a hoarse whisper. He is further distressed by painful cramps in the muscles of the calf and abdomen, and there is suppression of the functions of the kidneys. Death generally takes place in this the algid state. Should the patient survive he passes into the stage of reaction, the unfavourable symptoms disappearing and gradually passing into convalescence. In some of these cases which give hopes of recovery there is a relapse, the conditions of the algid state re-appearing and death taking place. It has recently been recognised as a cause of the dissemination of the disease, that patients who have recovered will continue to discharge the bacillus for many weeks.

The prevention of cholera lies in attention to water supplies, and in boiling and filtering as a matter of routine in Indian life. All the discharges from the sick should be treated with disinfectants, and soiled clothing and linen destroyed. People who have to tour in cholera-stricken districts, or who go on shooting excursions, or who find themselves in the midst of a cholera outbreak should undergo inoculation with Haffkine's preventive vaccine. Two inoculations are required, the second being more intense in its effects. The temporary symptoms which may arise after the inoculation are sometimes severe, being always more marked than after inoculation against typhoid, but the protection afforded more than makes up for the temporary inconvenience endured.

During the cholera season the mildest cases of diarrhœa should be brought for treatment to a physician, as such persons are more liable than others to contract the disease.

Treatment mainly resolves itself into meeting the extreme collapse with stimulants and warmth. There is great temptation to administer opium but in some cases this is not unattended with danger, and in others there is no capacity left in the patient for the absorption of drugs administered by the mouth. The mortality has, however, been reduced by the injection of saline fluid into the skin or directly into the veins, and also by the introduction of saline fluid of particular strength into the abdominal cavity,

KALA-AZAR.

This is a slowly progressive disease associated with great enlargement of the spleen and some enlargement of the liver, extreme emaciation, and a fever of a peculiar type characterised by remissions for short periods and due to infection by a parasite of remarkable characters which have only recently been worked out. It is attended with a very high mortality, about 96 per cent., and has up to the present resisted all methods of treatment, although some patients appear to improve for a time, only in the majority of cases to relapse later.

It is endemic in Assam, from which it has invaded Bengal, and is now often seen in Calcutta. It is also fairly often met with in Madras, though it is said that the cases are imported ones. It is very rarely seen in Bombay, and then only in immigrants from infected localities, though there appears to be a mild endemic centre in Jabalpur in the Central Provinces; so it is likely to be more frequently met with on the western side of India. It has caused great mortality among the coolies on the tea-plantations of Assam, especially among the children; but under the recent measures of prophylaxis which have been put into force since knowledge has been acquired about its real nature and method of spread, the ravages of the disease are likely to be limited. It is very rare among Europeans and then almost entirely among those who have been long in India or who have been born and bred in the country.

Infection seems generally to start in the cold weather. There is fever with rigors, and progressive wasting and loss of energy. The temperature chart is a curious one, the fever showing two remissions during the twenty-four hours. Diarrhœa is common, especially during the later stages of the disease. The spleen enlarges early and is generally of enormous size producing bulging of the abdomen. A remarkable feature is the tendency to the formation of ulcers, which in many cases, especially in children, takes the form of a gangrenous ulceration of the mouth and cheek. Death usually occurs from some intercurrent inflammatory condition, often pneumonia.

The parasite is found in the spleen and liver during life, and can be obtained by puncture of these organs. As thus obtained it is a minute round body of special characters. In this state it is known as the Leishman-Donovan body from its discoverers. This small body has been cultivated by Leonard Rogers in suitable media and under low temperatures, and found to develop into a flagellated, that is tail-possessing, organism. How this peculiar organism develops outside the human host is not yet completely known. It is certainly a house-infection, which accounts for the manner in which whole families have been swept off, one member after another. Its progress has been stayed by moving families from their infected houses and burning down their former quarters. This, and other facts connected with its spread, have suggested that the agent for conveying the poison from man to man is the common bed-bug, and Patton has succeeded in developing the flagellate stage in this creature when fed on the blood of the sick.

There is a severe form of ulceration of the skin known as "Delhi Boil" from which organisms very similar to the Leishman-Donovan body were obtained many years ago. These bodies have also been cultivated outside the human host and found to develop into a flagellated organism. The two parasites, though closely allied, are nevertheless distinct.

INFLUENZA.

During 1918 a peculiar and exceptionally widespread epidemic of influenza appeared, which affected the inhabitants of practically every continent. This epidemic not only caused, directly or indirectly, a very large number of deaths, which in India alone were computed to exceed five millions, but left behind it a legacy of minor ailments with consequent national debility. The economic effect through the disorganization of trade cannot be estimated but must have been very great. Although previously severe and worldwide epidemics have been known to occur, in none were the spread and mortality so alarming as in the epidemic of 1918. So far as it affected India, the epidemic of the Summer months assumed a mild form of the disease. After an apparent departure it reappeared in a virulent and very fatal form during the Autumn months and then seemingly disappeared at the end of the year. In fact this was not so as small localised epidemics have occurred and sporadic cases have continued throughout 1919.

A report on the outbreak by Major Norman White, I.M.S., Sanitary Commissioner with the Government of India, states that there is no doubt whatever that the virus of influenza is a living germ capable of being transmitted directly from man to man. The nature of this germ is still a matter about which dogmatic assertions are unwarranted. The so-called influenza bacillus was certainly, almost constantly present in the cases investigated during the second severe epidemic wave in India; It does not appear to have been demonstrated so frequently during the early mild stages of the epidemic. Whether the influenza bacillus is the true cause of the disease or merely a constant concomitant is a question that is open to doubt. Recent observations that have been made in France indicate the possibility that the true cause of the disease is in some stage of its life history ultramicroscopic, or in other words a germ so infinitely minute that the highest powers of the microscope are unable to demonstrate it. Be the primary cause of in

fluenza what it may, the mortality of the recent outbreak was almost entirely due to secondary infections with other disease-producing germs, notably the pneumococcus, the germ which commonly causes pneumonia. The pneumococcus was constantly associated with fatal cases in India. Much of the mortality in England and other European countries was ascribed to secondary infection with a streptococcus—another disease-producing germ. No constant association of germs of this latter class with severe influenza cases was noted in India though its occurrence has been reported, for example for Assam. With regard to the relative incidence of the disease among various classes of the population, our information is at present meagre. Among troops serving in India, the incidence of the disease was greater among British than among Indians, though the Indian mortality rate was very considerably in excess of the British. For British troops the hospital admission rate per thousand of strength was 218·2 for influenza and 3·1 for pneumonia, as compared with 135·6 and 20·2 for Indian troops. The death-rates for British troops were 8·96 for influenza and 0·65 for pneumonia, as compared with 15·21 and 6·18 respectively, for Indian troops. The normal incidence of pneumonia among Indian troops is nearly four times that among British troops. A study of the figures hitherto received indicates that influenza as experienced in India was especially fatal between the ages of 10 and 40, and that females suffered to a somewhat greater degree than males.

Influenza is a disease, which exhibits an intense infectivity and an incubation period which is relatively very short, *i.e.*, from 6 to 48 hours. It is commonly believed that the disease is spread by the infected secretions of the throat and nose of infected persons, finding lodgment in the nose and throat of uninfected people. The commonest means by which this occurs is by coughing and sneezing, especially in confined spaces. Methods of prevention then consist of preventing communication of infection by these channels.

LUNACY AND ASYLUMS IN INDIA.

The accommodation for mentally afflicted persons in British India is, like that for those afflicted bodily, very inadequate. In the Native States, the condition of affairs as regards the provision of institutions for the care and treatment of the insane, is still worse as no Asylums exist there at all, so that those whose malady is such as to render their freedom a public menace, are for the most part confined in the local jails.

According to the Census Reports of 1911 out of a total population of 315,156,396 (India and Burma), there are 81,006 persons insane, making a proportion of insane to sane of 5 per every 10,000.

In the United Kingdom the proportion of insane to sane is roughly 40 per 10,000, while in New Zealand it is as much as 45 per 10,000. In reviewing these figures it must be borne in mind that those of the United Kingdom and New Zealand include the "feeble-minded," an item that is not included in the figures for British India.

INDIA.

Provinces, States and Agencies.	General population.			Insane population.		
	Male.	Female.	Total.	Male.	Female.	Total.
Provinces under British Administration.	124,872,691	119,393,851	244,267,542	42,064	26,094	68,158
States and Agencies ..	36,465,244	34,423,610	70,888,854	7,979	4,869	12,848
Total for all India ..	161,338,935	153,817,461	315,156,396	50,043	30,963	81,006

For the care of the 81,006 insanes of India and Burma, there exists accommodation in Asylums for roughly 8,000, hence only one person in ten out of the total insane population of the country, can be afforded accommodation in the institutions that exist especially for their care and treatment.

The distribution of the Asylums in British India and their respective capacities are shewn in the following table :—

Province.	Total number of Asylums.	Names of Asylums.	Sanctioned capacity of the Asylums.			Total population during the year 1919.		
			Male.	Female.	Total.	Male.	Female.	Total.
Bengal	4	Bhowanipore Observation Ward	3	3	6	15	11	26
		Dacca Lunatic Asylum ..	274	45	319	341	40	381
		Berhampore Central Lunatic Asylum ..	616	148	764	711	135	846
		Insane Ward at the Albert Victor Leper Asylum, Gobra.	8	2	10	1	*Nil.*	1
Assam ..	1	Tezpur Lunatic Asylum	331	97	428	398	94	492
Bihar and Orissa ..	2	Ranchi European Lunatic Asylum ..	92	88	180	114	90	204
		Patna Lunatic Asylum	330	66	396	324	55	379
United Provinces of Agra and Oudh ..	3	Agra Lunatic Asylum	630	135	765	758	135	893
		Benares Lunatic Asylum ..	294	79	373	438	85	523
		Bareilly Lunatic Asylum ..	278	112	390	364	86	450
Bombay	6	Naupada Thana (Narottamdas Madhabdas) Lunatic Asylum.	230	42	272	378	84	462
		Ratnagiri Lunatic Asylum	135	43	178	182	52	234
		Central Lunatic Asylum, Yeravda — Europeans ..	77	35	112	85	34	119
		Central Lunatic Asylum, Yeravda — Indians ..	199	75	274	417	138	555
		Dharwar Lunatic Asylum	78	30	108	141	49	190
		Ahmedabad Lunatic Asylum	136	31	167	228	53	281
		Hyderabad (Sind) (Sir Cowasji Jehangir) Lunatic Asylum.	159	17	176	216	14	230
Madras	3	Madras Lunatic Asylum — Europeans ..	91	81	172	666	203	869
		Madras Lunatic Asylum — Indians ..	444	108	552			
		Vizagapatam Lunatic Asylum ..	79	17	96	79	15	94
		Calicut Lunatic Asylum	144	62	206	202	50	252
Punjab	1	Punjab Lunatic Asylum	672	190	862	990	227	1,217
Central Provinces ..	1	Nagpur Lunatic Asylum	304	126	430	403	113	516
Burma	2	Rangoon Lunatic Asylum	444	82	526	735	171	906
		Minbu Lunatic Asylum	138	*Nil*	138	136	*Nil.*	136
Total for all India ..	23 Lunatic Asylums.	.. .. ..	6,186	1,714	7,900	8,322	1,934	10,256

The Asylum at Ranchi in the province of Bihar and Orissa is an Asylum for Europeans and Americans only The term "Europeans" includes "Anglo-Indians." It was opened in 1918. Under orders of Government this Institution admits European and American patients from (1) Bengal, (2) Bihar and Orissa, (3) United Provinces of Agra and Oudh, (4) Punjab, (5) Central Provinces and Berar, (6) Assam and (7) in addition military insanes from the North-West Frontier Provinces and British Beluchistan. In association with this Asylum there is now under process of construction a large Asylum for natives of India The proposed accommodation is for 1,200 males and 300 females. As soon as this Asylum is completed the Indian insanes from the existing Asylums in the Provinces of Bengal and Bihar and Orissa will be transferred thither

At present there exists no special department either with the Provincial Governments or with the Government of India for the purpose of exercising supervision and control over Asylums, but quite recently the Government of India has approached the Provincial Governments with a view to ascertain their respective opinions as to the advisability of establishing a special Alienist Department.

The **administration of Asylums** is under the direct control of the Provincial administrative Medical Officers. In the case of the so called "Central" Asylums, that is to say, the Asylums at Madras, North Yeravda (Bombay Presidency), Lahore (Punjab), Agra United Provinces of Agra and Oudh), Berhampore (Bengal), and Rangoon (Burma) as well as the Asylum at Ranchi the charge of the institution is in the hands of a wholetime medical officer who is termed the "Superintendent". He is usually, but by no means always, a trained alienist The remaining Asylums are in the charge of the Civil Surgeon of the locality in which they happen to be situated. Not one of the existing Asylums in British India can be said to be up-to-date as regards construction, organisation, staffing or equipment. In every instance, even including the new Asylum for Burma which is now under construction in Rangoon, the custodial aspect of the Institution has received the greatest amount of consideration with the result that only a very little attention has been paid to all that goes towards the remedial requirements of the institution. It will probably take some years yet to obtain in India proper recognition of the fact that an Asylum for persons suffering from mental diseases should be a "hospital" in every sense of the term, hence its main raison d'être is to treat and to cure, and that every other consideration must be made secondary to this fundamental concept. Indeed, in almost every country in the world which makes any pretension to be regarded as civilised, the term "Asylum" has now been abolished for all institutions dedicated to the care and treatment of the insane. Owing to the lack of interest in Psychiatry and all that this term generally connotes in Europe and America, the nomenclatures that is still followed in the classification of mental diseases renders all official returns that are supposed to deal with the types of insanity occurring in the various Asylums in India, comparatively worthless. Even were a less obsolete classification of the varieties of mental diseases introduced it would not be possible in the existing absence of properly trained alienists to render information that would be of any great statistical value from a psychiatric stand-point.

The following table shews the classification of the **types of insanity** recorded in the reports published by every Province in India in the year 1919:

The principal types of insanity treated during the year 1919 in the Lunatic Asylums, in the Provinces of—

——	Bengal.	Assam.	Bihar & Orissa.	United Provinces.	Bombay.	Madras.	Punjab.	Central Provinces.	Burma.	Total.
Idiocy .. .	56	5	20	73	92	48	88	24	64	470
Mania	381	215	194	727	979	495	491	312	430	4,224
Melancholia	295	180	63	189	359	190	232	90	261	1,859
Mental Stupor	7	..	13	54	35	21	5	..	32	167
Delusional Insanity .	75	7	70	58	238	106	26	14	87	681
Insanity caused by *Cannabis indica* or its preparations .	173	68	30	205	69	85	126	1	3	760
Dementia .. .	82	..	107	228	244	235	170	32	146	1,214

It will be seen from the foregoing that the largest number of cases in the Asylums are shewn as "Mania" and "Melancholia." These terms "Mania" and "Melancholia" are now-a-days regarded as obsolete. For purposes of comparison of the terms that are nowadays employed to distinguish psychopathic states with those that are still permitted to hold good in India the following extract has been made from a recent report published by the Union of South Africa :—

Infection Psychoses.
Exhaustion Psychoses.
Intoxication Psychoses.
Thywigenous Psychoses.
Dementia Præcox.
Dementia Paralytica.
Organic Dementras.
Involution Psychoses.
Manic-depressive Psychosis.
Paranoia.
Epileptic Psychoses.
Psychogenic Neurosis.
Constitutional Psychopathic State.
Psychopathic Personalities.
Defective Mental Development.

As regards the **incidence of insanity** among the various races of India as well as the incidence of insanity in relation to occupation no really reliable information is obtainable in view of the comparative paucity of cases in proportion to the general population that come under observation. On the other the incidence by age is shown fairly well in the Census Report of 1911 to be as follows :

INDIA.

AGE.	Insane.		Distribution of the insane by age per 10,000 of each sex.	
	Male.	Female.	Male.	Female.
YEARS.				
0– 5	508	427	102	139
5–10	2,715	1,750	547	568
10–15	4,131	2,696	833	876
15–20	4,663	3,165	940	1,028
20–25	5,543	3,392	1,118	1,095
25–30	6,298	3,120	1,270	1,013
30–35	6,528	3,466	1,316	1,126
35–40	4,839	2,431	976	790
40–45	4,760	3,067	960	996
45–50	2,849	1,759	574	571
50–55	2,765	2,174	558	706
55–60	1,187	915	239	297
60–65	1,478	1 325	567	795
65–70	486	371		
70 and over age unspecified	853	751		
	446	174		
Total for all India	50,043	30,963	....	....

A further result of the general apathy, both official and non-official, towards matters pertaining to psychiatry, the subject of "feeble mindedness" has not yet come to be recognised as one that has any practical bearing on the welfare of the state as a whole with the result that there is no official institution for the care and education of feeble-minded children.

As regards the relation of insanity to crime, and more especially as regards the confinement of criminal insanes in jails, the report of the recent Commission of Enquiry into the subject of Indian Jails (published in 1920) contains some valuable suggestions. As things are the ideas both as regards the theory and the practice of dealing with insanity and crime in India, embodied in the existing legislation can only be described as archaic.

(See also "Insanity in India" by Colonel G. F. W. Ewens, I.M.S., and "Lunacy in India" by Major A. W. Overbeck-Wright, M.D., D.P.H., I.M.S.)

Drug Culture.

Two monographs on the cultivation of drugs in India, by Mr. David Hooper, of the Indian Museum; Calcutta, and by Mr. Puran Singh, of the Indian Forest Department, Dehra Dun, have lately been published. Mr. Hooper, in his paper, states that one-half of the drugs in the British Pharmacopœia are indigenous to the East Indies, and nearly the whole of the rest could be cultivated or exploited. The following are given as those that could be grown in quantity and as worthy of the attention of cultivators and capitalists: —

Belladonna, most of which is still imported, grows well in the Western Himalayas from Simla to Kashmir, the Indian-grown plant containing 0·4 to 0·45 per cent. of alkaloid.

Digitalis is quite acclimatised on the Nilgiris, growing there without any attention. The Madras Store Department obtains all its requirements from Ootacamund, and the leaf has been found equally active to that grown in England.

Henbane is a native of the temperate Himalayas from 8,000 to 11,000 ft. It was introduced into the Botanic Gardens, Saharanpur, in 1840, and it has been steadily cultivated there up to the present time, and the products supplied to medical depots satisfy the annual demand.

Ipecacuanha has been raised with a small measure of success in the hilly parts of India, and it only requires care and attention to raise it in sufficient amount to make it commercially remunerative.

Jalap-root grows as easily as potatoes in the Nilgiris, and there is no reason why the annual requirements (about 4,000 lbs.) for the Medical Stores of Bengal, Bombay and Madras should not be obtained from Ootacamund.

Mr. Puran Singh discussed the subject in a number of the "Indian Forester in 1914": he states that most of the drugs in the British Pharmacopœia grow wild in India, and that there is already a large export trade for some of them He adds, however, that materials collected at random cannot be expected to fetch full prices as they seldom come up to standard quality, and he adds: "The few drugs that are not indigenous to India could easily be made to grow in some part or other of this vast land. The great advantage accruing from the systematic cultivation of drugs is that a regular supply of genuine drugs of standard quality is assured. The variation in the quality of wild-grown drugs is sometimes a very serious drawback to finding a profitable market for them. The quality of *Podophyllum Emodi* growing wild in India is an illustration in point. This plant was discovered by Sir George Watt in the year 1888, and now, even after twenty-four years, in which it has been shown to be identical with the American drug that is being employed for pharmaceutical purposes, it still remains unrecognised by the British Pharmacopœia, which, as explained by the "Chemist and Druggist" some time ago, is solely due to the uncertainty which still exists as to its physiological activity".

Mr. Singh also points out that the Indian consumers of medicine depend mostly on herbs growing wild in the Forests, the more important of these probably numbering at least 1,000 This inland trade is very large; the possibilities in the Punjab alone being put at Rs. 50,00,000. He mentions saffron, liquorice, and salep as products exotic to India, whose cultivation in this country looks full of promise. Mr. Singh suggests that a complete survey be made of the extent of the inland trade in medicinal products found growing wild in Indian forests in order to arrive at the figures of annual consumption, and that the forest areas where the most important drugs grow should be preserved. Inquiries should be instituted as to the best methods of cultivation, and if need be, the means of extending the artificial propagation. It is to provide data to nduce the private capitalist to embark on such enterprises that Mr. Singh advocates the formation of some body to go into the matter. He suggests that India is well worthy of attention by those in this country who are interested in extending the culture of drugs in the British Empire. The Forest Department has already begun the cultivation of Indian podophyllum-root in the Punjab, United Provinces and the North-Western Frontier, and several maunds of dried rhizome are sold annually for local consumption. Mr. Hooper also shows that a start has been made in regard to the cultivation of belladonna, henbane and digitalis. One of the principal difficulties to be overcome is to ensure a ready market, and there is also always the danger of overproduction to be considered.

Essential Oils.

SANDALWOOD OIL is, by far the most, important perfumery product of India. The sandalwood tree is a root parasite, obtaining its nourishment from the roots of other trees by means of suckers. It grows best in loose volcanic soil mixed with rocks, and preferably ferruginous in character. Although in rich soil it grows more luxuriantly, less scented wood is formed, and at an altitude of 700 feet t is said to be totally devoid of scent. The best yield of oil is obtained from trees growing at an altitude of 1,500 to 4,000 feet, but the tree requires plenty of room so as to enable it to select vigorous hosts to feed it.

PALMAROSA OIL, also known as Indian geranium or "Turkish geranium oil" is another of the principal perfume products of India. It is derived from the grass, *Cymbopogon Martini*, which is widely distributed in India, where it is known as "Motya." Gingergrass is an oil of inferior quality, possibly derived from older grasses or from a different variety of the same species. Both oils contain geraniol, the proportion in palmarosa being from 75 to 95 per cent. and in gingergrass generally less than 70 per cent. These oils are used in soap, perfumery, and for scenting hair oils and pomades.

LEMONGRASS OIL is derived from *Cymbopogon citratus* and *Cymbopogon flexuosus*. The former is a native of Bengal, and is largely cultivated all over India, but the oil distilled on the Malabar Coast and Cochin is derived principally from *C. flexuosus*.

VETIVER, OR CUS-CUS, is a perennial grass, *Vetivera zizanoides*, found along the Coromandel Coast and in Mysore, Bengal and Burma, in

most heavy soil along the banks of rivers. The leaves are practically odourless and only used for thatching and weaving purposes. The roots are used in perfumery and in the manufacture of mats and baskets.

THE MALABAR CARDAMOM, *Elettaria cardamomum*, is the source of the seeds official in the British and other Pharmacopœias. Cardamom oil of commerce is, however, not distilled from this variety on account of the high price, but is obtained almost exclusively from the long cardamom found growing wild and cultivated in Ceylon. The oil is used medicinally as a carminative and is also employed by perfumers in France and America.

COSTUS ROOT (the root of *Saussurea lappa*) is a native of Kashmir, where about 2,000,000 lbs. are collected annually. It is exported in large quantities to China where it is used for incense. It is also used to protect shawls and clothes from the attacks of insects. Its odour resembles that of orris root.

BLUMEA BALSAMIFERA is the source of the Nagai camphor used in China for ritualistic and medicinal purposes. This shrubby composite is found in the Himalayas and is indigenous to India. It is widely distributed in India and is used by the natives against flies and other insects.

EUCALYPTUS plantations are situated chiefly in the neighbourhood of Ootacamund, Coonoor and Wellington, at elevations varying from 5,500 to 8,400 feet, the best being at from 7,200 to 8,000 feet. The climate of this region is fairly cool, equable and moist, with a well-distributed rainfall of about 50 to 80 inches; although frosts occur, the winters are mild on the whole, and snow is unknown. The soil, a red clay overlying gneissose rock, is rich and deep in some parts, shallow and poorer in others. A large factory is being built for the distillation of eucalyptus oil at Ootacamund. It is believed there is a considerable future for the undertaking, provided a sufficient supply of the leaves is available.

Manufacture of Quinine.

Government Cinchona plantations were started in India in 1862 from seed introduced by Sir Clements Markham from South America, of which the plant is a native. There are two main centres, Darjeeling and the Nilgiri Hills. In both localities a portion of the area is owned by tea or coffee planters, and the bark they produce is either sold to the Government or exported. Several species of cinchona are cultivated in India: namely, *Cinchona succirubra* (red bark), *C. calisaya* and *ledgeriana* (yellow bark), and *C. officinalis* (crown bark). The commonest species in Darjeeling is *C. ledgeriana*, and in Southern India *C officinalis*. A hybrid form is also largely grown and yields a good bark. At the Government factories both cinchona febrifuge and quinine are made. Thanks to these factories, practically no quinine is nowadays imported for Government purposes.

THE REPORT OF THE GOVERNMENT CINCHONA plantations and factory in Bengal for 1919-20 notes the re-establishment of the Dutch Combine on lines similar to those existing in pre-war days, the formation of a British Quinine Corporation for purposes of co-operative buying from the Dutch, and the release towards the end of 1919 of Government control of the quinine market in London. On decontrol, prices in the English market soon reached continental and American levels; fluctuations in rates of exchange, however, still leaving opportunity for speculation. The British Quinine Corporation working in harmony with the Dutch Combine now practically controls the English quinine market. Prices have of late shown a tendency to decline, but the production of bark and quinine as a lucrative, commercial proposition is established on a sounder foundation than ever. This position, no less than the lesson the last five years have taught of the advisability of relying on home industries for essentials, may be responsible for the growing interest various countries now evince in cinchona cultivation. In particular, is this true of America, Japan and —within the British Empire—India The year 1919-20 has witnessed the beginnings of a scheme for the supply from within the Empire of a larger proportion of its quinine requirements than has hitherto been possible. It is much too early yet to predict that Burma will prove an important source of the drug for India or the Empire, but work has started and, so far, the signs are hopeful. In the Bengal plantations the strain of war years is now evident in greatly reduced harvests. During 1919-20 513,043 lbs. only were cropped and there will be a still smaller harvest during 1920-21.

The total area under a full complement of cinchona is 3,080 acres, of which 2,319 acres are comparatively young. The approximate number of cinchona trees is 5,090,000, of which about 3,610,000 are on Munsong and 1,480,000 on Mungpoo.

DRUGS MANUFACTURE COMMITTEE.

In 1918 the Board of Scientific Advice accepted a proposal for the formation of a Drugs Manufacture Committee to investigate the possibilities of the cultivation of medicinal plants in India and the manufacture of drugs from them on a commercial scale. The Government of India acted on this recommendation and appointed a Committee whose primary functions will be to investigate. (1) the possibilities of the cultivation of medicinal plants in India, and (2) the manufacture of drugs from them on a commercial scale.

With regard to (1), the Committee will consider the various lines on which the investigation can best be undertaken, while, in connection with (2), it will consider the present position as regard the manufacture of drugs in India from indigenous products and the Indian requirements of such drugs as have until now been imported from abroad. As soon as experience has proved that any drugs can be manufactured at Government Medical Store Depots at a sufficiently low cost, private enterprise will be invited to undertake its manufacture. It

was announced in February 1920, that considerable progress had been made and that several articles which before the war were imported were being manufactured in India.

The Secretary of the Drugs Manufacture Committee should be addressed at the office of the Director-General, Indian Medical Service.

Intoxicating Drugs.

Among the drugs which are of great medicinal value, but of which the misuse has been a source of crime and disease among the people of India, there are, in addition to cocaine, **Opium** (for details of the trade see article on opium) which is the oldest and the best known. A resolution of the Government of India, dated August 19, 1912, adopted the policy of suppressing all public gatherings for the purpose of smoking opium and of prohibiting all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. The form which legislation should take was left to the local Governments, provided that an assembly of three or more persons for the purpose of smoking opium should be made illegal. In adopting this policy Government distinguished between opium smoking and opium eating. "Opium, said the Resolution, as taken in moderation by the average Indian is eaten either as a mild stimulant, or as a prophylactic against malaria, or for the relief of pain or in the treatment of diabetes. It is in fact a household remedy for many ills, and it is safe to say that as a national habit the eating of opium is less injurious than is the consumption of alcohol in many other countries. Centuries of inherited experience have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in Indian life. These conclusions were accepted by the Shanghai Commission (of 1909) who, while they recommended the gradual suppression of the practice of opium smoking, refrained from advising the abandonment of the policy of regulation by which the practice of opium eating in the country has hitherto been successfully kept under restraint."

Next to opium and cocaine, the most common drugs are the three **hemp** products which are freely used throughout British India. The Indian hemp is a shrub growing wild in the hills and lower elevations, and cultivated in the plains. The leaves of the wild plants, collected and dried in the sun, constitute **bhang**, a sort of green tea, which is mixed with boiling water and drunk as an infusion. This has an exhilarating effect, followed by a feeling of intoxication. When the female plants are cultivated they exude a resinous juice, which causes the flowering tops to stick together. Collected under these conditions the tops are rolled in the hands or pressed under foot; the first process produces "round ganja," and the second "flat ganja." **Ganja** is a stronger form of hemp than bhang, and is used for smoking. The third form of Indian hemp is **charas**, the resinous secretion of the plant that develops when it is grown at certain altitudes. Large quantities of charas are produced in Chinese Turkestan, and enter India by way of Leh. This is sold over the northern part of the country, and used for smoking purposes.

The Cocaine Traffic.

The form of cocaine chiefly used in India is Cocaine Hydrochloride. This salt forms light shining crystals, with a bitterish taste, and is soluble in half its weight of water. The alkaloid cocaine—of which this is a salt—is obtained from the dried leaves of the Erythroxylon Cocaine which grows in Bolivia, Peru, Java, Brazil and other parts of South America. The leaves are most active when freshly dried and are much used by the Natives as a stimulant. Tea made from them has a taste similar to green tea and is said to be very effectual in keeping people awake. In India the Coca plant seems never to have been cultivated on a commercial scale It has been grown experimentally in the tea districts of Ceylon, Bengal and Southern India and has been found to produce a good quality and quantity of cocaine. As the plant has not been seriously cultivated and as there is no possibility for the present of the drug being manufactured in India, no restrictions have as yet been placed on its cultivation.

Spread of the habit.—The cocaine traffic in India which seems to be reaching alarming proportion in spite of legislation and strict preventive measures is of comparatively recent growth; though it is impossible to estimate how widespread it was in 1903 when the Bombay High Court for the first time decided that cocaine was a drug included within the definition of an intoxicating drug in the Bombay Abkari Act. Since that date the illegal sale of cocaine in India has largely increased and the various provincial Excise Reports bear witness to the spread of the "Cocaine habit." The consumers of the drug, which is notoriously harmful, are to be found in all classes of society and in Burma even school children are reported to be its victims; but in India as in Paris the drug is mostly used by prostitutes or by men as an aphrodisiac. The habit has spread chiefly to those classes which are prohibited by religion or caste rules from partaking of liquor and the well known Indian intoxicating drugs.

Imports from Europe.—Cocaine and its allied drugs are not manufactured in India, but are imported. Most of the drug which is smuggled into India, comes from Germany and bears the mark of the well-known house of E. Merck, Darmstadt. This firm issues cocaine in flat packets of various sizes ranging from 1 to 3 ounces which are easily packed away with other articles and greatly favour the methods of smugglers. Owing to its strength and purity cocaine eaters prefer this brand to any other in the market. Restrictions on export from Europe have been under consideration for some time but as yet no international scheme devised so that end has been agreed upon. That trade was stopped during the war but Japanese imports into India became an almost equal danger.

Smuggling.—So far as the cases already detected show, the persons who smuggle the drug by sea from Europe and places outside India, into India, are chiefly sailors, stewards, firemen and sometimes engineers and officers of foreign ships. The ports through which cocaine enters India are Bombay, Karachi, Calcutta, Madras, Marmagoa and Pondicherry. The main inland distributing centres are Delhi, Lucknow, Meerut, Lahore, Mooltan, Surat and Ahmedabad. Delhi especially is notorious for the cocaine trade. Great ingenuity is employed in smuggling cocaine through the Custom houses. It is packed in parcels of newspapers, books, toys and piece-goods and in trunks which have secret compartments. The retail trade in the towns is very cunningly organized and controlled. In addition to the actual retailers, there is a whole army of watchmen and patrols whose duty is to shadow the Excise and Police Officials and give the alarm when a raid is contemplated. Since the commencement of the war several cases of importation of Japanese cocaine have been detected, the importers being Chinese and Japanese sailors. Chinese opium smugglers bring cocaine from Japan here to exchange it for Indian opium, which is smuggled into China. Most of the cocaine seized bears the mark "Sansedo & Co., Kobe." In 1919-20 the largest seizure of cocaine made by the Excise Department in Bombay was one of 5,712 grains.

Price.—The amount seized is either given to Hospitals in India or destroyed. It is no longer possible to buy cocaine from any betelnut seller as it was ten years ago, but scores of cases in the Police Courts show that the retail trade thrives, though to a diminished extent, in Bombay. High profits ensure the continuance of the trade. At present the English quotation varies from 36 to 40 shillings per oz. and the price as sold by licensed chemists in India varies from Rs 27 to Rs. 31 per oz. Owing to the war and the consequent stoppage of illicit importations from Austria and Germany it is not possible to buy the smuggled drug from the wholesale dealers for less than Rs. 100 to 120 per ounce and when sold by the grain the price realized varies from Rs. 400 to 425 per ounce. These profits are further enhanced by adulteration with phenacetin and inferior quinine.

The law in regard to Cocaine.—This varies in different provinces. A summary of the law in Bombay is as follows: No cocaine can be imported except by a licensed dealer and importation by means of the post is entirely prohibited. The sale, possession, transport and export of cocaine are prohibited except under a license or permit from the Collector of the District. A duly qualified and licensed Medical practitioner is allowed to transport or remove 20 grains in the exercise of his profession; and as far as 6 grains may be possessed by any person if covered by a *bona fide* prescription from a duly qualified Medical practitioner. The maximum punishment for illegal sale, possession, transport, etc., under Act V of 1878 as amended by Act XII of 1912 is as follows: Imprisonment for a term which may extend to one year or fine which may extend to Rs. 2,000 or both and on any subsequent conviction imprisonment for a term which may extend to 2 years or fine which may extend to Rs. 4,000 or both. The law in Bombay has been further amended so as to enable security to be taken from persons who have been convicted of cocaine offences. The new Act also contains a section for the punishment of house owners who let their houses to habitual cocaine sellers.

INDIAN TOBACCO.

The tobacco plant was introduced into India by the Portuguese about the year 1605. As in other parts of the world, it passed through a period of persecution, but its ultimate distribution over India is one of the numerous examples of the avidity with which advantageous new crops or appliances are adopted by the Indian agriculturist. Five or six species of *Nicotiana* are cultivated, but only two are found in India, namely, *N. Tabacum* and *N. rustica*. The former is a native of South or Central America, and is the common tobacco of India. About the year 1829 experiments were conducted by the East India Company towards improving the quality of leaf and perfecting the native methods of curing and manufacturing tobacco. These were often repeated, and gradually the industry became identified with three great centres: namely, (1) Eastern and Northern Bengal (more especially the District of Rangpur); (2) Madras, Trichinopoly, Dindigul, Coconada and Calicut in Southern India; and (3) Rangoon and Moulmein in Burma. Bengal is the chief tobacco growing Province, but little or no tobacco is manufactured there. The chief factories are near Dindigul in the Madras Presidency, though, owing to the imposition of heavy import duties on the foreign leaf used as a cigar wrapper, some cigar factories have been moved to the French territory of Pondicherry.

The Monghyr factory, which commenced business in 1908, had an output in 1918-19 of 2,024 million cigarettes and 144,000 lbs. of smoking tobacco.

The question of improving the quality of Indian tobaccos has received the attention of the Botanical section of the Agricultural Research Institute, Pusa, and three Memoirs have been published recording the results of investigations in that direction. The immediate problem at Pusa is the production of a good cigarette tobacco. Many attempts have been made in the past to introduce into India the best varieties of cigarette tobacco from America, but the results have been disappointing. It is now hoped to build up by hybridization new kinds of tobacco, suited to Indian conditions of growth, which possess in addition the qualities necessary to obtain a better price.

Area under Cultivation.—The cultivation of tobacco is very widespread in Burma. The two main varieties are called "Burmese tobacco" and "Havana tobacco" Of the Burmese tobacco there are two main varieties "Seywet-gyi," the large-leaved variety and "Seywet-gyun," a smaller-leaved variety with pointed leaves. The former yields a heavier crop, but the latter gives better quality. There is always a great demand on the market for both the Havana and the Burma tobacco. The smooth leaves of the Havana plant are used for the wrappers and the coarser Burmese leaf for the filling.

The most important tobacco tracts in British India are:—(*i*) the Combatore and Dindigal tract of Madras, where the *Usi-Kappal* and *Wara Kappal* varieties are largely grown, the former supplying the Trichinopoly cigar; (*ii*) the Godavari Delta of Madras; (*iii*) the Rangpur tract of Bengal; (*iv*) the Districts of Bihar and Orissa; (*v*) Guzerat in Bombay and (*vi*) the delta tract of Burma.

The season for harvesting varies in different localities ranging from December to June, but the bulk of the crop is harvested during the months of February, March and April. The leaves when quite dry, are assorted and placed in heaps in stacks to ferment They are then tied into bundles of 25 or 30, a useless leaf being employed for tying each bundle. The leaves are laid perfectly flat, the bundles being fan-shaped. In this condition they are baled, the broom-like ends projecting outwards. By varying the degree of fermentation of the leaves, different qualities of tobacco are obtained. A black variety is used in India for cake tobacco, and this is the most common product, but a certain amount of yellow leaf is grown for cigar making. The yield of tobacco varies in different localities ranging ordinarily from 160 lbs. to 800 lbs per acre, the return under high cultivation being from 800 lbs. to even 3,200 lbs. per acre.

Exports.—The bulk of the Indian tobacco exported consists of leaf, the kinds chiefly shipped being the "Bispath" (cheap country tobacco) and "Poolah" varieties of the Rangpore kind "Bispath" has no market in the United Kingdom, but is largely used by the Dutch. Twenty-three million lbs of unmanufactured tobacco were exported in 1920-21 as against 29 million in 1919 20. The United Kingdom took a little over 1¼ million lbs. as against 12½ million in 1919-20. China over 9 million, and Aden 6 million, against 2½ million and 873,000 lbs. respectively in the previous year. Exports to France were reduced to 361,950 lbs against 4½ millions in 1919-20. The enormous drop in exports to the United Kingdom and France was chiefly due to a slump caused by the unloading of munitions stocks in both countries.

Imports.—Imports of cigarettes increased from over 4 to over 6 million lbs. in quantity and from over Rs 1,68½ to over Rs. 2,56½ lakhs in value. The share of the United Kingdom in the total increased from Rs. 1,21 to Rs. 1,35 lakhs although the quantity imported therefrom decreased to 2,864,000 lbs. from 2,960,000 lbs. in 1919-20 and that of the United States from Rs. 13 to Rs. 1,05¼ lakhs.

Calcutta Improvement Trust.

The Calcutta Improvement Trust was instituted by Government in January, 1912, with a view to making provision for the improvement and expansion of Calcutta by opening up congested areas, laying out or altering streets, providing open spaces for purposes of ventilation or recreation, demolishing or constructing buildings and re-housing the poorer and working classes displaced by the execution of improvement schemes.

The origin of the Calcutta Improvement Trust must, as in the case of the corresponding Bombay body, upon which the Calcutta Trust was to a large extent modelled, be looked for in a medical enquiry which was instituted into the sanitary condition of the town in 1896, owing to the outbreak of plague. It was estimated that the Trust might in the ensuing 30 years have to provide for the housing of 225,000 persons. The population of Calcutta proper, which includes all the most crowded areas, was 649,995 in 1891, and increased to 801,251, or by 25 per cent, by 1901. The corresponding figure according to the 1911 Census was 896,067 and this had increased by 1921 to 993,508.

The problem of expansion was difficult, because of the peculiar situation of Calcutta, which is shut in on one side by the Hooghly and on the other by the Salt Lakes.

Preliminary investigations continued for several years, so that it was only in 1910 that legislation was eventually introduced in the provincial legislature and the Trust instituted by it. The Bill provided for a scheme involving the expenditure of Rs 8,22,00,000, and for special local taxation to this end. It also provided for the appointment of a whole time chairman of the board of trustees and the membership of the Trust was fixed at eleven.

The following formed the Board of Trustees in 1920-21; Mr. C. H. Bompas, C.S.I., I.C.S., M.L.C., *Chairman*; Mr. J. Donald, C.I.E., I.C.S., M.L.C., Chairman of the Corporation of Calcutta, *ex-officio*; Raja Reshee Case Law, C.I.E., M.L.C., elected by the Corporation of Calcutta; Rai Radha Charan Pal Bahadur, M.L.C., elected by the Ward Commissioners; Mr. W. H. Phelps, elected by the Commissioners appointed under Section 8 (2) of the Calcutta Municipal Act, 1899; Mr. S. G. L. Eustace, elected by the Bengal Chamber of Commerce, Babu Amulyadhon Addy, M.L.C., elected by the Bengal National Chamber of Commerce; Sir R. N. Mookerjee, K.C.I.E., Mr. W. D. R. Prentice, I.C.S., Rai Annada Prosad Sarkar, Bahadur and Mr. W. K. Dods, appointed by Local Government.

The work upon which the Trust definitely embarked may be divided into three classes as follows:—

Many parts of Calcutta are overcrowded with buildings and ill-provided with roads. These areas are to be re-arranged both on the ground of sanitation and for convenience of traffic;

Population will continue to throng into the overcrowded parts unless it can live on the outskirts and at the same time have speedy access to the business centres of the town. Quick traffic can only take place along broad roads. These are almost wanting in Calcutta. The construction of broad roads will at the same time ventilate the overcrowded parts of the town and it has been recognised from the outset that the construction of broad roads running both north and south and east and west will thus secure a double object;

There is the question of providing for the population displaced by improvements, and still more important of providing for the natural growth of population by laying-out roads and building sites on sparsely populated areas on the outskirts of the town. When persons of the working class are displaced or likely to be displaced the Trust can build dwellings for them if private enterprise does not undertake the work.

The Annual Report of the Trust for 1920-21 in running the work already accomplished said:—

At the end of the year 1919-20, the Trust had made over to the Corporation 5.18 miles of roads with an area of 159,521 square yards. At the beginning of the year 1920-21, 11·75 miles of roads were in hand and during the year an additional 6.31 miles of roads were commenced, giving a total of 18.06 miles in progress, out of which 6·89 miles were completed, but only 3·18 miles with an area of 103,153 square yards were handed over to the Corporation.

The total mileage handed over to the Corporation up to date is 8.36 miles with an area of 262,674 square yards. The length of roads remaining in hand is 14.88 miles of which 3·71 miles have been completed, but not handed over to the Corporation, and 11·17 miles are still in progress. The total mileage, which has been taken in hand, is 23·24 miles.

The after-effects of the war still seriously affect the progress of work, want of coal hampered the manufacture of bricks, and stone-metal, lime and paving stones were obtained with difficulty and in insufficient quantities. The extraordinary rise in the price of bricks in the season 1919-20 restricted private building operations and this indirectly has seriously upset the programme of the Trust.

The Board has reviewed its programme in view of the altered financial position caused by the rise in the rate of interest at which money must be borrowed and by the enhanced cost of materials. It is obvious that for a given income, the Trust will be able to accomplish very much less work than would have been the case under pre-war conditions and the decision of the Board was that as a matter of general principle it should proceed with those schemes, such as the construction of main roads in the centre of Calcutta, which no other local authority would be in a position to undertake.

BOMBAY IMPROVEMENT TRUST.

Bombay is an island twelve miles long, but very narrow and containing only 22 square miles altogether, but in the city, occupying little more than half the island, there lives a population enumerated at 972,892 at the Census in 1911, and actually totalling at the present time, according to conservative estimates, over a million and a quarter. Bombay is, in point of population, the second city of the British Empire. Seventy-six per cent. of its people live in one-roomed tenements. A terrible visitation of plague in 1896 harshly directed attention to the insanitary conditions arising from overcrowding and as it was recognised that the task of effecting the required improvements was too great for the Municipality, a special body, termed the Trustees for the Improvement of the City of Bombay, was appointed It consists of 14 members, of whom four are elected by the Municipality and one each by the Chamber of Commerce, the Millowners' Association and the Port Trust, and the balance nominated by Government, or sit *ex-officio* as officers of Government. The Board is presided over by a whole-time chairman (who has hitherto always been either a covenanted civilian or an officer of the Public Works Department) and he is also head of the executive. The present chairman and members of the Trust are as follow .—

Chairman—

Mr. E. G. Turner, I C.S., J.P.

Ex-officio Trustees—

Major-Genl. William Bernard James. C.B., C.I E , M V.O., Officer Commanding Bombay District.

Mr. J. P. Brander, I.C.S., J.P., Collector of Bombay.

Mr. H. B. Clayton, I.C.S., J.P., Municipal Commissioner for the City of Bombay.

Elected by the Corporation—

Dr. K. E. Dadachanji, J.P.
Mr. V. A. Pabholkar, O.B.E., J. P.
Mr. Naoroji M. Dumasia, J. P.
The Hon. Mr. P. C. Sethna, O.B.E., J.P.

Elected by the Chamber of Commerce—

Mr. Harry T. Gorrie, J P. (on leave) ; Mr. A. B. Morrison, J. P. (Actg.)

Elected by the Port Trustees—

Mr. G. W. Hatch, I.C.S., J.P.

Elected by the Millowners' Association—

Sir Vithaldas D. Thackersey, Kt.

Nominated by Government—

Sir Lawless Hepper, Kt., J.P.

Mr. Mirza Ali Mahomedkhan, M.A., LL.B , J.P.

Mr. H. P. Mody, M.A., LLB.

The specific duties of the Trust are to construct new and widen old streets, open out crowded localities, reclaim lands from the sea to provide room for expansion, and construct sanitary dwellings for the poor (including the Presidency Police) and also at the cost of employers of labour for the labourers employed.

Bombay city grew on haphazard lines, houses being added as population poured in with the growth of trade and without any regard to town planning or the sanitary requirements of a great town. The price of land was always comparatively high, owing to the small area of the island, and while the builder had only one object in view, namely, to collect as many rent paying tenants as possible on the smallest possible piece of land, there were no proper restraints to compel him to observe the most ordinary rules of hygiene. The result was the erection of great houses, sometimes five and six storeys high, constituting mere nests of rooms. There was no adequate restriction as to the height of these chawls, or the provision of surrounding open space, so that the elementary rules as to the admission of light and air went unobserved and the house builder invariably erected a building extending right up to the margins of his site. Consequently, great houses accommodating from a few hundred to as many as four thousand tenants were built with no more than two or three feet between any two of them and with hundreds of rooms having no opening at all into the outer air.

The Trust has practically reconstructed large areas on modern sanitary lines, but the old municipal by-laws having until within the past year remained quite inadequate for the due control of private building operations by the Municipality, the Trust have spent millions sterling of public money in sweeping away abuses, while unscrupulous landlords, still unchecked, added in the same old manner to the insanitary conditions of the place. It is hoped that the amendment of the by-laws, as recently settled, will overcome this evil of bad building.

Certain Government and Municipal lands were vested in the Trust, the usufruct of which it enjoys, and the Trust receives a contribution from municipal revenues amounting to a definite share in the general tax receipts, approximating to 2 per cent. on assessments and subject to no maximum. Works were financed out of 4 per cent. loans, until the war stopped borrowing by the Trust, the loans being guaranteed by the Municipality and Government, and the revenue of the Trust being used to meet interest and sinking fund charges. Short term loans were raised in 1919 and 1920 at 6 per cent. interest and recently the Trust was given a portion of the Bombay Development Loan proceeds (on which the rate of interest amounts to nearly 7 per cent.)

The salient features of the Trust's programme of 66 schemes as completed or sanctioned up to 1920-21 may be summarised as follows

The total capital expenditure up to 31st March 1921 was Rs. 955 lakhs. The margin for expansion is about Rs. 72 lakhs. The total borrowings stand at Rs. 953 lakhs, involving interest and sinking fund charges of Rs. 53 lakhs per annum

Plan of operations.

The work of the Trust, as epitomised by these figures, can be divided into two parts. The first concerned the immediate alleviation o

the worst burdens of insanitation and the second consisted of opening up new residential areas. The Trust began by attacking the most insanitary areas, cutting broad roads through them. Meanwhile, large areas of good building land, lying idle for want of development works, were developed and brought on the market, sold at remunerative rates and largely built upon. Instances of this development are the Chaupati and Gamdevi estates, the land overhung by Malabar Hill, between it and the native city. These were cut up with fine new roads and are now nearly covered with modern suburban dwellings. Two of the most insanitary quarters in the midst of the city have been level led to the ground and rebuilt in accordance with hygienic principles. Sanitary chawls have been built for over 21,000 persons.

The death-rate in the Trust's permanent chawls has always been considerably below the general death-rate in the vicinity. The smallest one room tenement on the Trust Estate is large enough for a family of five.

The second phase of the Trust's work, arising gradually out of the first and advancing along with its later stages, consists of the development of a new suburban area in the north of the island, beyond the present city, and the construction of great arterial thoroughfares traversing the island from north to south.

During the past few years there has been an important movement towards the establishment of co-partnership housing societies on the Board's Estate. The Board regard the new departure as one deserving every encouragement at their hands, especially in connection with the disposal of land in their suburbs in the north of the island and sites have been given to societies on specially favourable terms, and have granted valuable concessions to the Society which approached them for plots on the latter agreeing to limit their dividends. The Board have prevented, as far as possible, profiteering on their estates, by preventing the transfer of plots before completion of buildings.

But in recent years the Improvement Trust have perpetually been subjected to fierce criticism, based upon the undoubted fact that their operations dishoused population more quickly than they provided new accommodation. This evil has been aggravated by the great influx of new population into the city during the past five or six years. The result has been a gross increase of overcrowding in all kinds of housing accommodation throughout the city and a violent increase in rents. Criticism of the Trust assumed such proportions and received such general support that the abolition of that body and the absorption of its duties by the Municipality was formulated into definite proposals by Government two years ago. The great difficulty of the housing problem, however, meanwhile compelled Government to pass Rent Acts for the protection of tenants and to tackle on a large scale the problem of providing further housing accommodation. It was recognized that vast housebuilding operations must be undertaken and this involved the supervision of the work by a special body. Consequently, the Trust from being moribund has suddenly obtained a new lease of life.

Enormous schemes for the expansion of housing in the city are now passing through the final stages before being put into execution. Government, the Improvement Trust and the great employers of labour will all be concerned in the work and the Improvement Trust have floated a huge new programme, their new schemes sanctioned representing a greater undertaking than all their former schemes put together.

The new schemes of the Trust concern the northern part of Bombay Island, where large opportunities for suburban development offer themselves. At Worli on the north-west of the Island, at Dharavi on the north, and at Sewri and Wadala on the north-east, the Trust have undertaken development schemes involving the acquisition and development of 1,558 acres, or 2·43 square miles, that is, between 1/9th and 1/10th of the whole area of the Bombay Island. A considerable amount of filling of lowlying land is involved and for this purpose material from the hills on the north-east and north-west of the Island will be utilised, the hills being lowered in such a manner as to level them into desirable building sites. Room will be provided for more than a quarter of a million new population, equal to nearly ¼th of the present total population of the city, in the three new estates when they are fully developed and the recoupment which the Trust will derive from the disposal of building sites upon them will repay almost the whole of the enormous capital outlay.

A good commencement has been made of the Worli scheme where several thousands of labourers are now engaged. The Board have resolved to complete all their schemes so far sanctioned, within the next 5 years.

Government have decided to transfer the functions of the Trust to the Municipality and the necessary formalities and legislation to effect the transfer are receividg attention at their hands.

The Indian Ports.

The administration of the affairs of the larger ports (*Calcutta, Bombay, Madras, Karachi, Rangoon and Chittagong*) is vested by law in bodies specially constituted for the purpose. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government. Except in Calcutta, the elected members are fewer in number than the nominated members. At all the ports the European members constitute the majority and the Board for Rangoon consists mainly of European members.

The income, expenditure and capital debt, according to the latest figures obtainable from the Department of Statistics (India) of the five principal ports managed by Trusts (Aden is excluded from the tables) are shown in the following table :—

—	Income.	Expenditure.	Capital Debt.
	£	£	£
Calcutta ..	1,270,568	1,227,628	6,852,030
Bombay ..	1,311,202	1,242,194	10,317,716
Karachi ..	371,112	331,348	1,717,108
Madras ..	131,463	134,529	907,510
Rangoon ..	348,481	283,727	1,990,800

In the Department of Statistics, India, the following returns have been compiled, showing the ratios borne by the income and the expenditure of each port to the total income and the total expenditure, respectively, of all the chief Indian ports during the year 1918-19, the latest period for which the returns are obtainable :—

—	Income per cent.	Expenditure per cent.
Calcutta	36·7	37 8
Bombay	37·8	38 2
Madras .. .	3·8	4·1
Karachi	10·7	10·2
Rangoon .. .	10 0	8·7
Chittagong	1·0	1 0

The latest return of the Department of Statistics shows that in the ten years ending 1918-19, the income and expenditure of each port have increased as shown in the following table. The total income of all the ports has increased in the decade by 91·0 per cent. and the total expenditure by 79·9 per cent. :—

—	Increase per cent.	
	Income.	Expenditure.
Calcutta	61·0	53·5
Bombay	158·7	158·7
Madras	45·7	40·3
Karachi .. .	65·7	70·3
Rangoon	78·3	27·2
Chittagong . ..	280·3	133·2

The war has affected the trade of all the ports in a manner which makes it useless to continue comparisons up to date on the lines of the foregoing figures.

CALCUTTA.

The Commissioners for the Port of Calcutta are as follows :—

Appointed by Government.—Mr. D. H. Lees, I.C.S., Chairman, Mr. S. C. Stuart-Williams, Vice-Chairman.

Elected by the Bengal Chamber of Commerce.—Mr. R. O. Law (Messrs. Birkmyre Bros.), Mr. W. F. Reynolds (Messrs. Macneill & Co.), Mr. J. H. Pattinson (Messrs. H. V. Low & Co.), Mr. F. C. Danger, C.B.E. (Messrs. Hoare Miller & Co.), Mr. J. Campbell (Messrs. Mackinnon Mackenzie & Co.) and Mr. R. M. Watson Smyth (Messrs. Turner Morrison & Co.)

Elected by the Calcutta Trades Association.—Mr. W. H. Phelps (Williams, Heath & Co.)

Elected by the Bengal National Chamber of Commerce.—Babu Woomesh Chandra Banerjee.

Elected by the Municipal Corporation of Calcutta.—Raja Reshee Case Law, C.I.E., M.L.C.

Nominated by Government.—Mr A. M. Clark (Agent, Bengal-Nagpur Railway), Mr. C. D. M. Hindley (Agent, East Indian Rly.), Mr. J. Coates (Agent, Eastern Bengal Rly.), Mr. A. H. Lloyd, I.C.S. (Collector of Customs) and Captain C. R. Campbell, D.S.O., R.I.M. (Superintendent of Kidderpore Dockyard).

The principal officers of the Trust are—

Secretary.—Mr. T. H. Elderton.

Traffic Manager.—Mr. W. A. Burns.

Chief Accountant.—Mr. N. G. Park, C.A.

Chief Engineer.—Mr. J. McGlashan, M. INST. C.E.

Deputy Conservator.—Commander E. A. Constable, R.N.

Medical Officer.—Lt.-Col. R. P. Wilson F.R.C.S., I.M.S.

Consulting Engineer and London Agent.—Mr J. Angus, M. INST. C.E.

The traffic figures and the income of the Trust for the last eight years are as follows :—

Year.	Docks.			Jetties.	Nett tonnage of shipping entering the Port.	Income.
	General Export.	Coal Export.	Imports.	Imports.		
	Tons	Tons.				Rs.
1913-14 ..	1,231,589	3,017,180	613,876	1,186,797	4,256,987	1,51,28,435
1914-15 ..	920,659	2,633,805	700,133	917,978	3,714,344	1,44,50,349
1915-16 ..	1,054,985	1,610,645	570,997	788,481	2,967,798	1,59,35,456
1916-17 ..	1,185,159	1,994,528	444,210	686,010	2,804,680	1,57,23,432
1917-18 ..	995,112	1,014,993	363,383	633,693	2,094,011	1,58,39,175
1918-19 ..	1,097,562	1,333,285	482,403	575,833	2,292,462	1,90,53,513
1919-20 ..	1,116,479	2,261,976	653,066	713,746	2,941,846	2,23,55,614
1920-21 ..	1,133,719	3,046,400	413,357	684,990	4,017,514	2,66,08,032

BOMBAY.

The Board of the Trustees of the Port of Bombay is constituted of 17 members as follows :—

Appointed by Government.—Mr G. W. Hatch, I.C.S. (Chairman), Mr. Mahomedbhoy Currimbhoy Ebrahim (Messrs. Currimbhoy Ebrahim & Co.), The Hon'ble Mr. Phiroze C. Sethna, O.B.E. (Messrs Phiroze C. Sethna), Major-General W. B. James, C.B., C.I.E., M.V.O. (The Officer Commanding, Bombay District), Mr. H. B Clayton, I.C.S. (Municipal Commissioner, Bombay), Major-General Sir Henry Freeland, K.C.I.E., C.B., D.S.O., M.V.O. (Agent, B. B & C. I Railway), Rear Admiral H. L. Mawbey, C.B (Director, Royal Indian Marine), Mr Fazul Ibrahim Rahimtulla (Messrs. Fazulbhai Ebrahim & Co.), Mr. C. A. Hawes (Agent, G. I. P. Railway), Mr J. A. Stevens, C.I.E., O.B.E., V.D. (Collector of Customs, Bombay).

Elected by the Chamber of Commerce —The Hon'ble Sir A. H. Froom (Messrs. Mackinnon Mackenzie & Co.). Mr. T W. Dowding (Messrs. Turner Morrison & Co), Mr H. T. Gorrie (South British Insurance Co), Mr. A K. Graham (Messrs. W & A. Graham & Co.). Mr F. C. Annesley (Messrs. Killick Nixon & Co.)

Elected by the Millowners' Association.—Sir Vithaldas D. Thackersey, Kt. (Messrs. Vithaldas Damodar Thackersey & Co.)

Elected by the Native Piece-goods Merchants' Association.—Mr. Vithaldas Damodar Govindji (Messrs. Vithaldas Damodar Govindji & Co. and Damodar Govindji.)

The following are the principal officers of the Trust :—

Secretary, W. R. S. Sharpe ; *Deputy Secretaries*, C. M. Hanson and N. M. Morris.

Chief Accountant.—J. Tyers.

Chief Engineer.—Mr. A. C W. Fosbery, M.I C.E.; *Deputy Chief Engineers.*—Messrs. C. G. Stileman and C. W. Wales, M.I.C.E.

Port Officer.—Capt. A. S. Baltour, O.B.E., R.I.M.

The revenue of the Trust in 1920-21 amounted to Rs 2,22,97,561. The expenditure amounted to Rs. 2,21,57,968, which included a special appropriation of Rs. 3,50,000 towards a newly formed depreciation fund for the intermediate replacement of engines, wagons, rails, and sleepers on the Port Trust Railway. The net surplus on the year's working was Rs. 1,83,110, which was transferred to the Revenue Reserve Fund, the balance of which at the close of the year amounted to Rs. 72,35,498. The aggregate capital expenditure during the year was Rs. 76,01,827. The total debt of the Trust at the end of the year amounted to Rs. 16,76,84,767

The trade of the Port of Bombay during the last official year aggregated 289 crores in value.

The number of steam and square-rigged vessels which entered the docks or were berthed at the harbour walls and paid dues, excluding those which remained for unloading and loading in the harbour stream during recent years, including last year, is shown by the following statement :—

Year.	Number.	Tonnage.
1907-08	1,477	2,678,345
1908 09	1.474	2,633,303
1909-10	1,611	2,747,779
1910-11	1 589	2,866,623
1911-12	1,519	2,767,913
1912 13	1,566	2,926,566
1913-14	1,579	3,135,597
1914-15	1,880	4,417,035
1915-16	1,794	3,939,721
1916 17	2,112	5,031,572
1917-18	2,069	4,746,578
1918-19	2,058	4,526,846
1919-20	2,164	4,874,820
1920-21	2,029	4,589,627

The two dry docks were occupied by 248 vessels, the total tonnage amounting to 918,798 tons which was less than the previous year by 66,359 tons.

KARACHI.

The members of the Board of Trustees of the Port of Karachi are as follows :—

Chairman.—Mr. J. B. S. Thubron, C.I.E.

Appointed by Government—Mr. H. H. Hood (Chief Collector of Customs in Sind), Mr. F. R. Hawkes, O.B.E. (District Traffic Superintendent, North Western Railway, Karachi Port), Lt.-Col. G. F. Perkins, D.S.O. (General Staff Officer, Sind-Rajputana District), Major C. L. Whitaker (Embarkation Commandant, Keamari), Mr. E. Miller (Anglo-Siam Corporation Ltd.) (on leave), Mr. D. J. MacGillivray (Mackinnon Mackenzie & Co.) (acting), Mr. Gidumal Lekhraj (Representative Indian Merchant) and Khan Bahadur K. H. Katrak (Katrak & Co.)

Elected by the Chamber of Commerce—Sir Montagu Webb, Kt., C.I.E., C.B.E. (Forbes Forbes Campbell & Co., Ltd.) (on leave), Mr. C. C. Demetriadi (Ralli Bros.) (acting), Mr. A. O. Brown (Mackinnon Mackenzie & Co.) (on leave), Mr. H. G. Houghton (Donald Graham & Co.) (acting) and Mr. S. E. Woodward (Clements Robson & Co.).

Elected by the Municipality—Mr. Wadhumal Oodharam, B.A., LL.B., M.L.C.

The principal officers of the Trust are :—

Port Officer.—Captain G. N. Forteath, R.I.M.

Assistant Port Officer and Harbour Master.—Commander H. Tronson, R.N.R. (Retired).

Secretary and Traffic Manager.—Mr. T. S. Downie, O.B.E.

Chief Accountant.—Mr. B. A. Inglet, B.A., C.A.

Chief Engineer.—Mr. W. H. Neilson, O.B.E., M.A., M. Inst. C.E., M.I.M.E.

Deputy Chief Engineer.—Mr. T. H. E. Coad, M. Inst. C.E.

The revenue receipts and expenditure of the Port of Karachi for the year 1920-21 were as under :—

Revenue receipts (excluding the Port Fund Account) Rs. 55,33,192. Expenditure Rs. 53,26,102. Surplus Rs. 2,07,090. Reserve Fund Rs. 27,07,321.

The number of vessels which entered the Port during the year 1920-21 exclusive of vessels put back and fishing boats, was 3,358 with a tonnage of 2,108,346 against 3,578 with a tonnage of 1,85,02,121 in 1919-20. 880 steamers of all kinds entered the Port with a tonnage of 1,962,414 against 822 and 1,688,031, respectively, in the previous year. Of the above 813 were of British nationality.

Imports landed at the ship wharves during the year totalled 330,357 tons against 263,308 in the previous year. Total shipments from the ship wharves were 820,641 tons in 1920-21 against 582,755 tons in 1919-20.

MADRAS.

The following gentlemen are the Trustees of the Port of Madras —

Officials.—Mr. H. H. G. Mitchell, O.B.E., M. Inst., C.E., M.I.E. (Ind.) (Chairman), Mr. A. M. Green, I.C.S. (Collector of Customs), Capt. E. W. Huddleston, C.I.E., C.B.E., R.I.M. (Presidency Port Officer) and M.R.Ry. Rao Bahadur A. V. Ramalinga Ayyar Avargal, B.A., B.C.E. (Superintending Engineer, V Circle, Madras).

Non-Officials.—(1) *Nominated by Government.*—A. A. Biggs, M. Inst. C.E., Mr. C. Crighton, Mr. Abdul Hussain Khaleeli. (2) *Representing Chamber of Commerce, Madras.*—Mr. J. F. Simpson, M.L.C., Mr. W. A. Turner, Mr. W. Alexander, M.L.C., Mr. T. M. Ross. (3) *Representing Southern India Chamber of Commerce, Madras*—M.R.Ry. Divan Bahadur Govindass Chatterbhoojadoss, M.L.C., and M.R.Ry. M. Venugopaul Naidu Avergal. (4) *Representing Madras Trades Association.*—Mr. S. J. Green and Mr. R. J. C. Robertson.

The receipts during the year of the Port Trust on Revenue account from all sources were Rs. 29,58,786 as against 25,49,667 in 1919-20 and the gross expenditure out of revenue was 25,10,082. During the year 648 vessels with an aggregate tonnage of 1,662,444 tons, including 351 from foreign ports, 171 from coast ports and 103 country sailing craft, called at the port against last year's figure of 521 vessels of 1,166,352 tons.

RANGOON.

The personal of the Commissioners for the Port of Rangoon is comprised of the following thirteen members :—

Appointed by Government.—Messrs. J. A. Cherry, C.I.E., M.I.C. (Chairman), A. E. Boyd (Officiating Chief Collector of Customs, Burma), G. Scott, M.A., I.C.S. (President, Rangoon Municipality), Captain A. Hamilton, D.S.O., R.I.M. (Principal Port Officer, Burma), Major R. W. Macdonald, D.S.O., I.A. (Commissioner of Police), Maung Po Yee, Messrs. R. Graham and J. R. D. Glascott.

Elected by the Burma Chamber of Commerce.—Messrs. J. A. Swan (Vice-Chairman), J. Hogg, A. B. Ritchie and A. J. Anderson, C.S.I.

Elected by the Rangoon Trades Association.—Mr. G. S. Clark.

Principal Officers are :—

Deputy Chairman.—Mr. I. Cowling.

Secretary.—Mr. H. Leonard.

Chief Engineer—Mr. E. C. Niven, M. Inst. C.E.

Deputy Conservator.—Mr. H. G. G. Ashton, D.S.O.

Port Health Officer.—Dr. C. G. Crow, K.I.H.

The receipts and expenditure on revenue account of the port of Rangoon in 1920-21 were as follows :—

	Rs.
Receipts	54,61,738
Expenditure	54,12,048

The capital debt of the port at the end of the year was Rs. 2,98,62,000. Against this should be set the total of the balance (including investments at cost) at the credit of the different sinking funds, namely, Rs. 83,50,520.

The total imports (landed or sent inland in river craft) from sea-going vessels amounted to 1,120,279 tons. The tonnage of goods dealt with at the jetties and foreshore for inland vessels during the year amounted to 1,319,392 tons. The total number of steamers (excluding Government vessels) entering the port was 1,303 with a total net registered tonnage of 2,767,816 being an increase of 249 steamers and 518,065 tons over the previous year.

CHITTAGONG.

Chittagong, in Eastern Bengal, on the right bank of the Karnaphuli river 12 miles from its mouth, was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando. The construction of the Assam Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of the Piecegoods, salt and kerosene oil are imported, and jute and tea are the principal exports.

The chief business is the export of tea, piecegoods, salt and kerosine oil are imported, and tea and jute are the principal exports—

Foreign Trade, 1920-21. Rs. (in lakhs.)	
Imports	111·12
Exports	295·92

Coasting Trade, 1920-21.	
Imports	269·24
Exports	108·98

Port Commissioners.—Messrs. A. H. Clayton, I.C.S. (Chairman), F. W. Strong, I.C.S. (Vice-Chairman), T. R. Nolan, P. T. Moore, J. A. Stein, R. Brodie, J. B. Dickie and Rai Upendralal Roy Bahadur, M.L.C.

Port Officer and Secretary to the Port Commissioners.—Commander E. C. Withers, C.I.E., R.I.M.

Port Engineer.—Mr. W. P. Barron, A.M. Inst. C.E.

Vessels of 6,000 tons can ascend the river Karnafuli to the town, where there are four jetties, mooring accommodation and four 10-ton hydraulic cranes and seventeen to lift 35 cwt.

VIZAGAPATAM HARBOUR PROJECT.

The question of the creation of a harbour at Vizagapatam, to supply an outlet for a large area of fertile country hitherto undeveloped and without suitable access to the outside world, was lately brought to the fore through a report to the Bengal-Nagpur Railway Company by their consulting engineers, Sir John Wolfe Barry, Lyster and partners. This report, which was based on personal inspection, upholds the practicability of creating, at no very extravagant cost, an inland harbour to which access would be maintained by two breakwaters projecting into the sea, and by dredging a channel to the depth (in the first instance) of 24 feet. A deep-water quay would be provided, 1,500 feet in length, with a possibility of supplying further accommodation in the future. The proposals made in this report were carefully gone into at site by representatives both of the consulting Engineer and of the Bengal Nagpur Railway and working plans have been prepared so that there might be no delay in starting work when funds became available for the purpose.

The question received sympathetic consideration on the part of the Indian Government and the Bengal-Nagpur Railway will probably be given powers to raise capital for the construction and working of the port as part of their railway system. That the creation of such a port would have a beneficial influence on the development of a large area in East Central India seems unquestioned. It is pointed out that Vizagapatam, lying as it does in front of the only practicable gap in the barrier of the Eastern Ghats, is formed by nature to be the outlet of the Central Provinces, from which a considerable amount of trade has taken this route in the past, even with the imperfect communications hitherto available. A necessary complement of the scheme would be the construction of the proposed railway by Parvatipuram to Raipur, which with the existing coast line of the Bengal Nagpur Railway, would make a large and rich area tributary to the proposed port, and obviate the long and expensive circuit by Calcutta. A link would also be supplied in the most direct route to Rangoon from Europe by way of Bombay, while from an imperial point of view the possible provision of a fortified port on the long and almost unprotected stretch of coast between Colombo and Calcutta is held to be a consideration of great importance. The lofty projecting headland of the Dolphin's Nose would, it is pointed out, offer facilities for this purpose as well as protecting the entrance to the Port from the effects of south and south-westerly gales.

The necessary steps are being taken by the Government of India to achieve this end 12 square miles of land are being acquired for the purposes of the harbour.

Famine.

Famine in India is the inevitable accompaniment of economic conditions which leave the bulk of the people dependent on the soil for their means of livelihood. It is intensified, because the produce of the soil over the greater part of India is independent on a short rainy season, and the rains are erratic and subject to violent fluctuations. It falls with exceptional severity on India because the soil is divided into a multitude of petty holdings, tilled by people without any capital, living for the most part from hand to mouth, and amongst whom credit ceases to exist as soon as the rains fail. In other agricultural countries there are good seasons and bad; but there is none other, with the possible exception of China, where in a famine year millions of acres may not yield so much as a blade of grass, except under artificial irrigation. The conclusion to be drawn from these conditions is that for many years to come India must be susceptible to famine. The shock of famine may be mitigated by the spread of railways, by the development of irrigation, the growth of manufacturing industry and the improvement of rural credit. There is evidence that all these forces are tending greatly to reduce the social and economic disturbance caused by a failure of the rains But they cannot entirely remove it.

Famine Under Native Rule.

At one time there was a general tendency to attribute famine in India entirely to the effect of British rule. In the golden age of India, we were told—whenever it may have been—famine was unknown. But India had been drained of its resources of food by the railways, the people had been impoverished by the land revenue demand and the country as a whole had been rendered less capable of meeting a failure of rains by the "Drain" caused by the Home Charges (*qv*). These fallacies have disappeared under the inexorable logic of facts. A better knowledge of Indian history has shown that famines were frequent under Native rule, and frightful when they came. "In 1630" says Sir William Hunter, in the History of British India, "a calamity fell upon Gujarat which enables us to realise the terrible meaning of the word famine in India under Native rule. Whole cities and districts were left bare of inhabitants." In 1631 a Dutch merchant reported that only eleven of the 260 families at Swally survived. He found the road thence to Surat covered with bodies decaying on the highway where they died, there being none to bury them. In Surat, that great and crowded city, he could hardly see any living persons; but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Further historical evidence was adduced by Sir Theodore Morrison in his volume on the Economic Transition of India. The "Drain" theory has been exploded. It has come to be seen that whilst railways have checked the old-fashioned practice of storing grain in the villages they have made the reserves, where they exist, available for the whole of India. In India there is now no such a thing as a food famine; the country always produces enough food for the whole of the population; famine when it comes is a money famine, and the task of the State is confined to providing the means for those affected by drought to earn enough to buy food. The machinery whereby this is done will be examined after we have seen the experiences through which it was evolved.

History of Recent Famines.

The Orissa famine of 1865-67 may be taken as the starting point because that induced to first great and organised effort to combat distress through State agency. It affected 180,000 square miles and 47,500,000 people. The Bengal Government was a little slow in appreciating the need for action, but later food was poured into the district in prodigious quantities. Thirty-five million units were relieved (a unit is one person supported for one day) at a cost 95 lakhs. The mortality was very heavy, and it is estimated that a million people, or one-third of the population, died in Orissa alone. This was followed by the Madras famine of 1866, and the famine in Western India of 1868-70. The latter famine introduced India to the great migration from Marwar which was such a distinguishing feature of the famine of 1899-1900; it is estimated that out of a total population of a million and a half in Marwar, one million emigrated. There was famine in Behar in 1873-74, then came the great South Indian Famine of 1876-78. This affected Madras, Mysore, Hyderabad and Bombay for two years and in the second year extended to parts of the Central and United Provinces and to a small tract in the Punjab. The total area affected was 257,000 square miles and the population 58,500,000. Warned by the excessive expenditure in Behar and actuated by the desire to secure economy the Government relief programme was not entirely successful. The excess mortality in this famine is said to have been 5,250,000 in British territory alone. Throughout British India 700,000,000 units were relieved at a cost of Rs. 8½ crores. Charitable contributions from Great Britain and the Colonies aggregated Rs. 84 lakhs.

The Famine Codes.

The experiences of this famine showed the necessity of placing relief on an organised basis. The first great Famine Commission which sat under the presidency of Sir Richard Strachey, elaborated the Famine Codes, which amended to meet later experience, form the basis of the famine relief system to-day. They recommended (1) that employment should be given on the relief works to the able-bodied, at a wage sufficient for support, on the condition of performing a suitable task; and (2) that gratuitous relief should be given in their villages or in poor houses to those who are unable to work. They recommended that the food supply should be left to private agency; except where that was unequal to the demands upon it. They advised that the land-owning classes should be assisted by loans, and by general suspensions of revenue in proportion to the crop failure. In sending a

Famine Code to the provincial governments, the Government of India laid down as the cardinal feature of their policy that the famine wage "is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." Provincial codes were drawn up, and were tested by the famine of 1896 97. In that 307,000 square miles were affected, with a population of 69,500,000. The numbers relieved exceeded 4,000,000 at the time of greatest distress. The cost of famine relief was Rs. 7¼ crores, revenue was remitted to the extent of Rs. 1¼ crore, and loans given aggregating Rs. 1¼ crore. The charitable relief fund amounted to about Rs. 1¾ crore, of which Rs. 1¼ crore was subscribed in the United Kingdom. The actual famine mortality in British India was estimated at 750,000. The experiences of this famine were examined by a Commission under Sir James Lyall, which reported that the success attained in saving life and the relief of distress was greater than had ever been recorded in famines, comparable with it in severity, and that the expense was moderate. But before the Local Governments had been given time to digest the proposals of this Commission or the people to recover from the shock, the great famine of 1899-1900 supervened.

The Famine of 1899-1900.

This famine affected 475,000 square miles with a population of 59,500,000. In the Central Provinces, Berar, Bombay, Ajmer, and the Hissar district of the Punjab famine was acute. It was intense in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. It was marked by several distinctive features. The rainfall over the whole of India was in extreme defect, being eleven inches below the mean. In several localities there was practically no rain. There was in consequence a great fodder famine, with a terrible mortality amongst the cattle. The water supply was deficient, and brought a crop of difficulties in its train. Then districts like Gujarat, where famine had been unknown for so many years that the locality was thought to be famine immune, were affected; the people here being softened by prosperity, clung to their villages, in the hope of saving their cattle, and came within the scope of the relief works when it was too late to save life. A very large area in the Native States was affected, and the Marwaris swept from their impoverished land right through Central India like a horde of locusts, leaving desolation in their train. For these reasons relief had to be given on an unprecedented scale. At the end of July 4,500,000 persons were supported by the State, Rs. 10 crores were spent on relief, and the total cost was estimated at Rs. 15 crores. The famine was also marked by a widespread acceptance by Native States of the duty hitherto shouldered by the Government of India alone—the supreme responsibility of saving human life. Aided by loans to the extent of Rs. 3½ crores, the Native States did a great deal to bring their administration into line with that in British India. Although actual deaths from starvation were insignificant, the extensive outbreaks of cholera, and the devastating epidemic of malaria which followed the advent of the rains induced a famine mortality of approximately a million. The experiences of this famine were collated by the Commission presided over by Sir Antony MacDonnell. This Commission reported that taking the famine period as a whole the relief given was excessive, and laid down certain modified lines. The cardinal feature of their policy was moral strategy. Pointing out that if the people were assisted at the start they would help themselves, whilst if their condition were allowed to deteriorate it proceeded on a declining scale, they placed in the forefront of their programme the necessity of "putting heart into the people." The machinery suggested for this purpose was the prompt and liberal distribution of tagai loans, the early suspension of revenue, and a policy of prudent boldness, starting from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help. The wage scale was revised; the minimum wage was abolished in the case of able-bodied workers; payments by results were recommended; and proposals were made for saving cattle.

Success of the new policy.

The effectiveness of this machinery was partly demonstrated during the three lean years which followed the great famine in the Bombay Presidency. But it received its most conspicuous demonstration when the rains failed in the United Provinces in 1907-08. Moral strategy was practised here on an unprecedented scale, tagai loans being granted with the greatest liberality. The effect of these measures was succinctly indicated by the Lieutenant-Governor of the United Provinces, Sir John Hewett, in a speech in summarising his administration prior to his departure in England in March 1912. He showed that in the autumn harvest of 1907 there was a shortage of 4 million tons of food grains and in the spring harvest a shortage of 3 million tons, giving a total of seven million tons, or the food supplies for the Province for nine months and an economic loss of £38 million pounds. The Government advanced £1¼ million to cultivators for temporary purposes and large sums for wells and permanent irrigation. The whole of this sum was repaid except fifty-four thousand pounds remitted owing to a second bad season and twenty-five thousand pounds then outstanding. By common consent a great famine had never been met with less loss and suffering to the people, and two years later hardly a trace of it remained. In 1911 the rainfall failed over a considerable area in Gujarat in the Bombay Presidency and again in 1912 in the Ahmednagar District of the Bombay Deccan and both these partial failures demonstrated that the shock of famine is far less severe now, owing to the increased resourcefulness of the people, than it was so late as 1899. Still further evidence in the same direction was furnished when the rains failed over large areas in the United Provinces in 1913-14. This famine affected 17,000 square miles with a population of 5½ millions, whilst distress was grave in 30,000 square miles with a population of 14 millions.

Three points soon emerged from the year—the people showed greater resisting power owing to their improved economic condition; they met the emergency with wonderful courage and resource; and the application of the relief programme brought the numbers on public works within manageable proportions, and induced the speedy return of the people to their normal avocations when the advent of bountiful rains in 1914 enabled agricultural operations to be generally resumed.

The Government of India is now in possession of complete machinery to combat the effects of drought. In ordinary times Government is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up to date, the country is mapped into relief circles, reserves of tools and plant are stocked. If the rains fail, policy is at once declared, non-officials are enlisted, revenue suspended and loans for agricultural purposes made. Test works are then opened, and if labour in considerable quantities is attracted, they are converted into relief works on Code principles. Poor houses are opened and gratuitous relief given to the infirm. On the advent of the rains the people are moved from the large works to small works near their villages, liberal advances are made to agriculturists for the purchase of plough, cattle and seed. When the principal autumn crop is ripe, the few remaining works are gradually closed and gratuitous relief ceases. All this time the medical staff is kept in readiness to deal with cholera, which so often accompanies famine, and malaria, which generally supervenes when the rains break.

Famine Protection.

Side by side with the perfection of the machinery for the relief of famine has gone the development of famine protection. The Famine Commission of 1880 stated that the best, and often the only means of securing protection from the extreme effects of famine and drought, are railways and irrigation. These are of two classes, productive and protective. Productive works being estimated to yield profits which will pay interest and sinking fund charges are met from loans; protective works, which do not pay, directly from revenue. In order to guarantee that there should be continuous progress with protective works, the Famine Insurance Grant was instituted in 1876. It was decided to set apart from the general revenues Rs. 1½ crores annually or one million sterling. The first charge on this grant is famine relief, the second protective works, the third the avoidance of debt. The chain of protective railways is now practically complete. Great progress is being made with protective irrigation. Acting on the advice of the Irrigation Commission (*q v*) an elaborate programme of protective irrigation works is being constructed, particularly in the Bombay Deccan—the most famine susceptible district in India—and in the Central Provinces. When these are completed, the shock of drought will be immensely reduced.

The Outlook.

Such in brief is the official programme and organisation which has been built up out of the experience and practice of the past. Yet everything goes to show that Government activity to save human life will never be wanted in the future on the colossal scale of former times, even so recently as 1899-1900. Each succeeding failure of the rains indicates that there has been in silent progress an economic revolution in India. Reference has been made to the powerful protective effect of tagavi in the last famine in the United Provinces. These lessons were driven home when the rains failed in the same Province in 1913. But a far more striking demonstration was given. In the year 1918 the rains failed more seriously and over a wider area than during any monsoon in the recent history of India. The deficiency in the rainfall was more marked than in the great famine of 1899. Yet such was the increased resisting power of the people that instead of a demand for State relief from over five millions, the maximum number at any time in receipt of public assistance was never so large as six hundred thousand. The shock to the social life of the community was insignificant; the effects of the drought completely disappeared with the good rains of the following year.

Increased Resisting Power.

The causes of this economic change in the conditions of India, whose influence is widespread, are many. We can only briefly indicate them here. There is a much greater mobility in Indian labour. Formerly when the rains failed the ryot clung to his village until State relief in one form or another was brought almost to his doors. Now at the first sign of the failure of the rains he girds up his loins and goes in search of employment in one of the industrial centres, where the supply of labour is rarely equal to the demand, or on the constructional works which are always in progress either through State or private agency in the country. Then the ryot generally commands some store of value, often mistermed a hoard. The prices of agricultural produce have enormously increased of recent years, especially of export crops like cotton, and as three quarters of the people are directly or indirectly dependent on the soil, they have proportionately benefited. The balance of exports in favour of India in normal times is approximately £ 50 millions a year. The gold and silver bullion in which this is largely liquidated is distributed all over the country, in small sums or in ornaments, which can be drawn upon in an emergency. The prodigious coining of rupees during the last two years of the war, and the continuous absorption of gold by India, represent small diffused savings, which take this form owing to the absence of banking institutions and lack of confidence in the banking system. There has been a large extension of irrigation. More than one-third of the land in the Punjab is now under irrigation, and in other Provinces, particularly in the famine-susceptible tracts of the Bombay Deccan, irrigation works have been constructed, which break the shock of a failure of the rains. Then the natural growth of the population has been reduced by plague and famine diseases, followed by the great influenza pandemic of 1918-19, which swept off five millions of people. This has not only prevented the increase of congestion, but has brought some areas particularly in the Native States below their former population supporting capa-

city. The increase of railways distributes the resources of the country with ease. Finally, there is the considerable development of manufacturing industry, which is generally short of labour and helps to absorb the surplus of a famine year. Whilst the Government is completely equipped with a famine code, there is no reason to suppose that there will ever recur such an emergency as that of 1899. Famine can now be efficiently met by the liberal distribution of tagavi, the suspension and remission of the land revenue demand, the relief of the aged and others who cannot work, with possibly some assistance in transporting the affected population of the famine-affected tract to the industrial centres.

The Indian Famine Trust.

Outside the Government programme there is always scope for private philanthropy, especially in the provision of clothes, help for the superior class poor who cannot accept Government aid, and in assisting in the rehabilitation of the cultivators when the rains break. At every great famine large sums have been subscribed, particularly in the United Kingdom, for this purpose, and in 1899-1900 the people of the United States gave generous help. With the idea of providing a permanent famine fund, the Maharaja of Jaipur gave in 1900 a sum of Rs. 16 lakhs, in Government securities, to be held in trust for the relief of the needy in time of famine. This Trust has now swollen to Rs. 30 lakhs, chiefly from gifts by the founder's family. It is vested in trustees drawn from all parts of India, and is freely used in an emergency.

BOY SCOUTS.

The Boy Scouts movement, initiated in England by Lt.-Gen. Sir Robert Baden Powell (the Chief Scout), has spread widely in India, both among Europeans and Indians. The Viceroy is Chief Scout of India and the heads of Provinces. Chief Scouts in their own areas. The aim of the Association is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—and teaching them services useful to the public and handicrafts useful to themselves.

It is confidently anticipated that in the Boy Scout Movement will be found a natural mean, of bridging the gulf between the different races existing in India. The movement is non-official, non-military, non-political and non-sectarian. Its attitude towards religion is to encourage every boy to follow the faith he professes. Every boy admitted as a Scout makes a threefold promise to do his best: (1) to be loyal to God and the King; (2) to help others at all times; and (3) to obey the Scout law. The law referred to lays down—

1. That a Scout's honour is to be trusted;
2. That he is loyal to God and the King, his parents, teachers, employers, his comrades, his country and those under him;
3. That he is to be useful and to help others;
4. That he is a friend to all and a brother to every other scout, no matter to what social class the other belongs,
5. That he is courteous;
6. That he is a friend to animals;
7. That he obeys orders;
8. That he smiles and whistles under all difficulties;
9. That he is thrifty;
10. That he is clean in thought, word, and deed.

During the war a number of independent organisations sprang up. These have mostly been amalgamated under the parent body and complete amalgamation is hoped for. The number of scouts is probably about 15,000 of all races.

HEADQUARTERS STAFF IN INDIA.

Chief Commissioner—Sir A. D. Pickford, 2, Hare Street, Calcutta.

Hony. General Secretary—D. N. Basu, 14, Balaram Ghose's Street, Calcutta.

Hony. Treasurer—E. E. Savi, Alliance Bank of Simla, Calcutta.

Hony. Quarter-Master—H. S. Suhrawardy, 3, Wellesley 1st Lane, Calcutta.

Bankers.—The Alliance Bank of Simla, Calcutta.

More than sixty per cent. of the vast population of India subsists on agriculture and the majority of these millions generally live, under present conditions, from hand to mouth. The ryot's occupation is healthy and productive, and he is proverbially honest and straightforward in his dealings, except when years of famine and hardship make him at times crafty and recalcitrant. Owing to his poverty, combined with deficiency in education and consequent lack of foresight, he has to incur heavy debts to meet occasional expenses for current seasonal purposes, the improvement of his land, or for ceremonial objects, and he has therefore to seek the assistance of the local money-lender, known as the Sowkar or the Mahajan. The rate of interest on such advances though varying from province to province and even in different parts of a province is generally very high. In addition to charging excessive rates the Sowkar extorts money under various pretexts and takes from the needy borrower bonds on which heavy stamp duties are payable. One of the chief causes of the ryot's poverty is, that owing to the absence of security and his short-sightedness due to want of education, he does not as a rule collect and lay by his savings, but fritters away his small earnings in extravagant and unproductive expenditure on the purchase of trinkets and ornaments and on marriage and other ceremonies. In some cases, he hoards coins under the ground with the likelihood that on his death the money is lost to his family for good. This absence of thrift and the habit of dependence, in case of difficulty, on the Government or on the Sowkar are the bane of his life. There is besides a total absence of ideals or desire for progress. A co-operative society would change all this, inasmuch as it would provide him with a suitable institution in which to lay by his savings and would teach him the valuable lesson of self-help through the sense of responsibility he would feel in being its member. Thus the chronic poverty and indebtedness of the Indian agriculturist afford a very good field for the introduction of co-operative methods, especially as his work is of a productive character likely to enable him to earn a better living under circumstances more favourable than they are at present.

Genesis of the Scheme.—The question of improving rural credit by the establishment of agricultural banks was first taken up in the early nineties when Sir W. Wedderburn, with the assistance of the late Mr. Ranade, prepared a scheme of Agricultural Banks which was approved of by Lord Ripon's Government but was not sanctioned by the Secretary of State. The matter was not again taken up until about fifteen years later when Lord Wenlock's Government in Madras deputed Mr. F. A. (now Sir Frederick) Nicholson, to report on the advisability of starting Agricultural and other Land Banks in the Presidency for the relief of the agriculturists. There was an indigenous system of banking available for the person of small means. This institution called the Nidhi, corresponded in some respects to the Provident Funds and Friendly Societies in European countries. Though these institutions provided cheap capital to the agriculturists the spirit of co-operation was lacking in them. Sir Frederick submitted an exhaustive report to Government suggesting that the formation of co-operative societies afforded an excellent means for relieving rural indebtedness. The report surveyed the growth of the co-operative movement in European countries, the conditions favourable to its development in India, if introduced, and the difficulties to be encountered in introducing it and making it a success here. Finally, it contained, for the consideration of Government, a draft Bill for the organization of Co-operative Societies. Sir Frederick pleaded for concessions to be given to the societies—such as exemption from the income-tax and remission of the stamp duty—as he felt that it would be possible to attract the people to the new movement only if Government showed its active sympathy towards it at the commencement. He ended with a fervent appeal to the non-official community "to find a Raiffeisen" who would help the ryots of this country in achieving results equal to those obtained by Raiffeisen's noble efforts in Germany. Unfortunately the report was not received favourably either by the non-official public or by the Government of Madras, and no action was taken on its suggestions.

Famine Commission of 1901.—The next few years saw two of the worst famines that India had ever suffered from, and in 1901, Lord Curzon appointed a Commission to report on the measures to be adopted in future to prevent famines and to protect the ryot from their ravages. The Commission laid stress on the proper working of the Agriculturists' Loans and the Land Improvement Loans Acts under which *takavi* advances are made to cultivators. This system was given a long trial in the years previous to the great famines as well as during the ten years succeeding the 1899-1900 famines. But it is acknowledged on all hands that the system has not been successful in solving the problem of rural stagnation as it is clear that it is not facility for obtaining cheap capital alone which will raise the agriculturists and relieve him from his debts, but the provision of capital combined with the inculcation of habits of thrift and self-help. The Commission also recommended that the principal means of resisting famines was by strengthening the moral backbone of the agriculturist and it expressed its view that the introduction of co-operation in rural areas might be useful in securing this end.

Co-operative Credit Societies' Act.—These recommendations induced Lord Curzon to appoint a Committee with Sir Edward Law at its head to investigate the question and a Report was submitted to Government recommending that co-operative societies were worthy of every encouragement and of a prolonged trial. Sir Anthony (now Lord) Macdonell and others were at the same time making experiments on similar lines in the United Provinces and the Punjab with satisfactory results. All these activities, however, took an organized shape only when Lord Curzon's Government introduced in the Supreme Legislative Council a Bill to provide for the constitution and control of Co-operative Credit Societies. The main provisions of the Bill which became the Co-operative Credit Societies' Act (Act X of 1904) were:—

(1) That any ten persons living in the same village or town or belonging to the same class or caste might be registered as a Co-operative

Society for the encouragement of thrift and self-help among the members.

(2) The main business of a Society was to raise funds by deposits from members and loans from non-members, Government and other Co-operative Societies, and to distribute money thus obtained by way of loans to members, or with the special permission of the Registrar, to other Co-operative Credit Societies.

(3) The organization and control of Co-operative Credit Societies in every Presidency were put under the charge of a Special Government Officer called the Registrar of Co-operative Credit Societies.

(4) The accounts of every society were to be audited by the Registrar or by a member of his staff free of charge.

(5) The liability of a member of a society was to be unlimited in the case of a Rural Society.

(6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members.

(7) In the case of Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

Soon after the passing of the Act the local Governments in all the Presidencies and major provinces appointed Registrars with full powers to organise, register, and control the Management of societies. In the early stages of the working of this Act, Government loans were freely given, and the response to the organising work of the Registrars was gradual and steady throughout most parts of the country.

Co-operative Societies' Act—As co-operation progressed in the country defects were noticed in the Co-operative Credit Societies' Act and these were brought to the notice of Government by the Provincial Conferences held under the auspices of Local Governments in various Presidencies, as well as by the Annual Conferences of the Registrars. In two directions the need for improved legislation was especially felt. In the first place, the success of credit societies had led to the introduction of co-operative societies for distribution and for purposes other than credit for which no legislative protection could be secured under the then existing law. And in the second place, the need for a freer supply of capital and for an improved system of supervision had led to the formation of various central agencies to finance and control the original credit societies and these central agencies ran all the risks attendant on a status unprotected by legislation. The Government of India, recognising the need for removing these defects, decided to amend the old Act, and a Bill embodying the essential alterations proposed was introduced in the Imperial Legislative Council, and after a few amendments it emerged from the Council as the Co-operative Societies' Act (II of 1912) replacing Act X of 1904. The outstanding features of the new Act were as follows:—

(*a*) It authorised the formation of societies for purposes other than credit, which was possible under the old Act only with the special permission of the Local Government. This extension of Co-operation to purposes other than credit marks an important stage in its development in India.

(*b*) It defined in precise terms the objects for which Co-operative Societies could be organised.

(*c*) It removed the arbitrary division of societies into Rural and Urban and substituted the more scientific division in accordance with the form of liability adopted.

(*d*) It facilitated the growth of central agencies by insisting on a limited liability by means of a special clause about the registration of a society one of whose members is a registered society.

(*e*) It empowered the Local Government to frame rules and alter bye-laws so as to put restrictions on the dividends to be declared by societies and allowed them the discretion to sanction distribution of profits to their members by unlimited liability societies.

(*f*) It allowed societies with the permission of the Registrar to contribute from their net profits, after the Reserve Fund was provided for amounts up to 10 per cent. of their remaining profits to any charitable purpose as defined in the Charitable Endowments' Act. This kept the movement in touch with local life by permitting societies to lend assistance to local educational and charitable institutions.

(*g*) It prohibited the use of the word "Co-operative" as part of the title of any business concern except a registered society.

Composition of the Capital of Agricultural Societies.—On the organization of agricultural credit was necessarily concentrated the attention of the promoters, for it presented a far more important and far more difficult problem than industrial credit. There was a great variety of types among the agricultural societies started in different provinces, and some Registrars adopted the "Schulze-Delitzsch," some the "Raiffeisen," and some the "Luzzatti" methods in their entirety. The commonest type, as in the Punjab, Burma, and the United Provinces, is the unlimited liability society with a fee for membership and a small share capital, the share payments to be made in instalments. In some cases the system insists on compulsory deposits from members before entitling them to enjoy the full privileges of membership. The system in Bombay, Bengal, and the Central Provinces is entirely different, there being no share-capital but only a membership-fee. Part of the working capital is raised by deposits from members and other local sympathisers, but the bulk of it in all provinces is obtained by loans from Central and other co-operative societies. In all the Presidencies, the Government set apart in the initial stages every year a certain sum to be advanced as loans to newly started co-operative societies, usually up to an amount equal to the deposits from members, raised by a society. State aid in the form of money doles has now become an exception rather than the rule, and this withdrawal in no way hampers the development of the movement on account of the rapid increase of Co-operative financing agencies and the growth of public confidence in the primary societies. For agricultural societies generally, the main sources of capital

are shares, deposits of members, deposits from non-members and loans from central Societies. Out of a total working capital of nine and a half crores, shares and reserves each amounted to a crore and a quarter, members' and non-members' deposits to half a crore each, State aid to a quarter crore and loans and deposits from societies and banks five and three quarter crores.

Constitution of Agricultural Societies.—The typical Agricultural Society in India corresponds to the "Raiffeisen" society, the management being gratuitous, the profits indivisible, and the area of work limited. In the Punjab, the United Provinces and Burma where shares form an integral part of the system, the distribution of a portion of the profits after ten years working is permitted under certain restrictions. Usually, the secretary gets a monthly pay of Re. 1 to Rs. 5 with a bonus at the end of the year equal to a fourth of annual profits. In parts of the country there are villages where a few literate men may be found but most of these are hardly fit enough to undertake the responsible work of a secretary, being practically ignorant of account keeping. In such villages either the village school-master or the village accountant is appointed secretary. In some places, where a suitable person is not available on this low pay neighbouring societies are grouped together with a whole-time, well-paid secretary. This arrangement, which has its advantages, involves the drawback that the outsider working as secretary does not naturally take as much interest in the society's working as a *bona-fide* member does and is less amenable to the control of the members. As the work of societies develops, the need for trained secretaries is being felt more keenly for it is now realized that the function of a secretary does not consist merely in writing the accounts correctly. With a view to meet the demand for trained secretaries, training classes have been organized in Bombay and elsewhere during the last few years and education in co-operation has been placed on a systematic basis by the new educational and propagandist associations which have been organized in all the major provinces. In Bombay and Bengal arrangements have also been devised to educate the members of managing committees in the principles of the movement through peripatetic instructors and courses of simple lectures

Internal Management of Societies—The managing committee of a society consists of 5 to 9 members of the society, the chairman being usually the leading person in the village. The daily work of the society is carried on by the secretary, but the managing committee supervises the work and has alone the power to admit new members, to receive deposits, arrange for outside loans, grant loans to members and take notice of defaulters. The accounts of the society are kept by the secretary and the necessary forms, papers, and books are usually supplied from the Registrar's office to simplify the work of the secretary. The books are kept according to the rules framed by the Local Governments and are open to inspection by important local officials and the Registrar and his staff. The accounts are audited, at least once a year by the auditors working under the Registrars of Co-operative Societies and the Societies are inspected from time to time by honorary or paid Inspectors. In Burma and Madras the inspection is carried out by unions, while in the United Provinces, Bihar and Orissa, Ajmere-Merwara and Bengal the responsibility for supervision rests with the central banks. In the Central Provinces, the inspection is controlled by the Provincial Federation working through the Central Bank. In Bombay supervision is exercised partly by unions, partly by Central Banks and partly by honorary organizers. In the Punjab, while paid for by societies, the inspecting staff works under the direct orders of the Registrar. The loans are mostly given on the security of two co-members. Under the Act, Societies are allowed under certain conditions to advance loans on the hypothecation of moveable or immoveable property, and there is nothing unco-operative in this so long as personal security which is the central principle of co-operation is given and the borrower's property is recognized as only a secondary or collateral protection. Mortgages are taken occasionally, especially in the case of long term loans and loans for the liquidation of old debts.

The supreme seat of authority in co-operative societies is the general body of members assembled in general meetings. At the annual general meeting held at the close of the co-operative year the accounts are submitted, the balance-sheet passed, and the managing committees with the chairmen and secretaries are elected. The general meeting fixes in some provinces the borrowing limit of individual members, lays down the maximum amount up to which the Managing Committee may borrow during the ensuing year dismisses members for misconduct or serious default, and settles the rates of interest for loans and deposits. All the net profits of the society are annually carried to the Reserve Fund, which is indivisible, that is, incapable of distribution as dividend or bonus, which cannot be drawn upon without the sanction of the Registrar, and which must be invested in such a manner as the rules framed under the Act prescribed. It is intended to meet unforeseen losses and to serve as an asset or security in borrowings. Except in the Central Provinces and Madras, the Reserve Funds of primary societies are generally utilised as an addition to their working capital, though steps are being taken in some parts of the country to stop this practice and to insist on the Reserve being kept entirely apart from the working capital and invested in Government securities or placed as floating deposits in Central Banks. The Government of India state in their Resolution of 17th June 1914 "that while there may be advantages in the earlier stages in using the Reserve as part of the working capital of the society, it should gradually, as it becomes more important, be set apart for separate investments." The Eighth Conference of Registrars held in 1918 has also accepted this view. The general trend of opinion seems to be that primary societies should be free to utilize their reserve funds as part of the working capital except when they have considerable outside deposits and have not made special arrange-

ments in respect of fluid resource to cover such borrowings.

Main defects.—The main defects of primary societies may be summarized. The most prominent is the evil of unpunctuality. This is due more to easy going ways of life and the narrowness of margin between income and expenditure than to recalcitrancy. Next is the frequent apathy of the members in the work of the societies owing to lack of education and absence of higher ideals. The general body leaves affairs at the mercy of the committee and the committee transfers its powers to the chairman, secretary or some other member. Then there is the objectionable practice of making book-adjustments and taking *benami* loans. A grave defect is the inability of the societies to act as real banks, accepting for deposit money when presented meeting withdrawals of such savings, deposits or temporary surplus funds without delay and granting loans on demand according to actual requirements. In many a society, activity is displayed only twice in the year, once during the cultivation season when loans are advanced and again after harvest time when recoveries are collected. In several provinces members have to wait for weeks before they can get funds for agricultural operations, and as such operations must be proceeded with resort to the money-lender is not uncommon. To provide for members who want large loans on the security of land for clearance of debt or agricultural improvement, separate land mortgage societies have been started in the Punjab, and will be found necessary in other Provinces if the members are to be financed adequately for all approved objects. Moreover, as the bye-laws place a limitation on the amount of loan that can be advanced to an individual and the financing agencies often cut down the loan requirements, the Society has, in no sense, supplanted the money-lender. Owing to absence of banking facilities the societies are further unable to meet emergent demands, and to receive repayments in small sums at the convenience of members.

Non-agricultural Societies.—Non-agricultural credit societies have grown up in towns and cities for improving the economic and moral condition of persons engaged in handicrafts and cottage industries, of artisans and small traders, members of particular castes and employees of big firms and Government departments. Non-agricultural societies, except those for handicraftsmen, artisans, and persons of the poorer classes, referred to later, have usually a limited liability. This is due partly to the absence of any assets in real property among their members, but mainly to the field of their work not being compact as in the case of agricultural societies, where every member may be expected to know every other member. Their constitution is based on the 'Schulze Delitzsche' model and in most cases the management is honorary, though sometimes, when the sphere of a society's work is extended, a paid staff is employed. There is in all societies a substantial share capital, payments being made in monthly instalments, and the rest of the working capital is obtained by local deposits from members and others. Loans from co-operative and Joint Stock Banks usually form only a meagre portion of the capital. Of the total working capital of roughly Rs. 2,90,00,000, Rs. 65,00,000 represent loans and deposits from non-members, Rs. 5,000 loans and deposits from other societies, Rs. 21,00,000 loans from Provincial or Central Bank, Rs. 78,00,000 deposits from members, Rs. 1,00,000 share capital, Rs. 16,00,000 reserve fund and Rs. 3,00,000 State aid. At the end of every year one-fourth of the net profits must be carried to the reserve fund and the balance may be distributed as dividend or bonus. There are a few drawbacks in the working of these societies. The most serious of these complaints are that the spirit of co-operation is lacking in many non-agricultural societies, that there is too great a desire to go in for profits and dividends and a growing tendency to make the societies close preserves once they have started running on profitable lines. The rates of interest on loans are at times higher than they ought to be, and the men at the head of the societies are loth to admit new members who are in need of loans for fear of the latter cutting down the profits.

Included in this group are communal societies, and societies of employees of firms, railway companies and Government offices. There are again, a few societies organized on the lines of the People's Banks of Europe to assist small traders and artisans in towns and there are also some societies comprising members of particular communities. These give promise of developing a truly non-capitalist system of banking run for the people and by the people, providing for the person of small means those modern banking facilities which have so largely assisted in developing trade and industries in other countries. Some of the larger non-agricultural societies, after meeting the needs of their members, have large balances on hand, which they are allowed, with the previous sanction of the Registrar, to advance to smaller primary societies.

With the growth of industries and the development of cities an important labouring class has grown up in big industrial towns and this class is as deeply indebted and as badly remunerated as the agriculturists. Co-operation, if introduced among people of this class, would open a new life to them besides being the means of their economic regeneration. No systematic efforts have hitherto been made in this direction, as urban co-operation has so far been confined more or less to middle class people. The first experiment was initiated in Bombay under the auspices of an organization known as the Debt Redemption Committee. Some work in this direction has also been done in Madras, particularly among the depressed classes and among the low-paid employees of municipal bodies. The Social Service League of Bombay has also lately started several promising societies among factory workers and the starting of co-operative credit societies for workers in factories has come to be recognized as an essential feature of every well-considered scheme of welfare work.

Loans advanced.—The total amount of loans advanced to members by agricultural and non-agricultural societies during the year 1919-20 were Rs. 4,96,32,640 and Rs. 2,54,75,665, respectively, as against the total of less than Rs. 25 lakhs issued by both these classes of societies

in the year 1906-7. As the movement progresses, it is being more and more realised that the early clearance of a member from previous debts after his admission to a society is very desirable and greater attention is being bestowed by co-operative workers on this question. It is impossible to insist on the restriction of loans to productive objects and there are circumstances under which unproductive loans are permissible and even advisable. What should be and generally is borne in mind is that precautions are taken by societies that the expenditure is inevitable and that it is not excessive in amount. The chief objects of the loans advanced are cultivation expenses, purchase of live-stock, fodder, seed, manure and agricultural implements, payment of rent, revenue or irrigation dues, land improvement and sinking of wells, purchase of new lands, and personal maintenance in times of scarcity in agricultural societies, and for purchase of raw materials for industries, for trade, for house-building and for food and other necessaries of life in non-agricultural societies. The terms of the loans are one year or less on those for current needs, whether for agriculture or petty trade, and up to five years or so on loans for liquidation of old debts or for land improvement. An unsatisfactory feature of the co-operative system in some of the Provinces is the laxity and unpunctuality in the matter of repayment of loans by members and a general apathy in the matter on the part of societies. As co-operation is both financially and educationally a failure unless promptitude of payment is ensured, no efforts are spared by organizers to educate societies in this respect. The Co-operative Societies' Act grants to societies priority of claim over other creditors (except the State or the landlord) to enforce any outstanding demand due to the societies from members or past members upon the crops or other agricultural produce, and upon the cattle, fodder or agricultural implements, in cases where loans have been advanced for the purposes specified. Law Courts have ruled that such claim is not valid unless a decree is obtained by a society in its favour in advance. To carry out the intention of the framers of the legislation it is proposed to convert this claim into a lien and thus get over the legal difficulty. But not content with this, some co-operators have pleaded for special powers of recovery of loans under which overdue loans may be recovered as arrears of land revenue. Most local Governments have framed rules under the Act enabling the Registrar to refer disputed claims to arbitration and to enforce the award of the Registrar in the same manner as a decree of the Civil Court. It is not likely that Government will sanction a special process under which claims against defaulting members may be recovered according to procedure allowed for the recovery of arrears of land revenue. For the existence of a special privilege of this character cannot but lead to laxity in the selection of members and carelessness in the granting of loans and in securing regular repayments on them. Demand for a special procedure for the recovery of the dues of a cancelled society stands on a somewhat different footing and the Local Governments of Bengal, and Bihar and Orissa have already passed enactments enabling the contribution levied by the liquidator of a cancelled society to be collected in the same manner as arrears of land revenue on an application being made in that behalf by the Registrar of Co-operative Societies. Legislation on similar lines has been adopted in Madras Bombay, the Central Provinces and the United Provinces.

The Financing of Agricultural Societies.—As soon as the initial stage of the movement had passed, a very urgent problem had to be faced. This was to finance the agricultural societies that were growing in all directions. And the problem was solved in different provinces according to the special conditions and the stages of development the movement had attained therein. In Madras, a Central Bank, which lent to Co-operative Societies all over the Presidency, was started without Government aid as early as in 1907. This was followed by the starting of banks at district head-quarters. In other Presidencies, district and taluka banks were established making good the deficiency in the local capital of the societies within their districts, and in some places Joint Stock Banks were persuaded to make advances direct to agricultural societies or through the medium of local Central Banks. A large number of prosperous non-agricultural societies, as stated above, could afford to lend to agricultural societies. Government aid was also freely given. With the progress of the movement, however, this aid was discontinued. In Bombay there was no movement to start local financing agencies and the very slow progress of the movement made it difficult for central banks with a restricted area of operations to work successfully. Accordingly the Bombay Central Co-operative Bank was founded in 1911, with a share capital of Rs. 7 lakhs and with power to issue debentures at 4 per cent. up to three times the amount of the paid-up share capital, the Government guaranteeing payment of interest on the debentures till their repayment.

Neither of these was organized as a co-operative Apex Bank in the true sense of the term. In the Bombay Central Bank, co-operative societies are members and may be expected gradually to assist in shaping its general policy. The Madras Central Bank has been recently converted into a Provincial Bank working in harmony with district banks. A Provincial Bank with Central Banks and societies affiliated to it is in existence in Upper Burma, and this Bank finances primary societies either through the affiliated local banks or through the guaranteeing unions composed of societies. An Apex Bank was started in the Central Provinces in 1913 to form an immediate link between the district banks in the Province and the Joint Stock Banks in Allahabad and elsewhere. It has worked well and its success led to the establishment of a Provincial Bank with a similar constitution in Bihar and Orissa. A scheme has also been set afoot for having a Provincial Apex Bank in Bengal, where, as also in Bihar and Orissa, the primary societies are at present financed by Central Banks at district or *taluka* head-quarters. A Provincial Federation of Central Banks has for the present been started transferring to itself the deposit liabilities of local banks, and distributing these according to requirements. The Federation also acts as the balancing centre for the pro-

vince and provides fluid resource to affiliated banks. In the United Provinces primary societies are financed on the same system, and there, too, the starting of a Provincial Apex Bank under which Central Banks will be federated is under contemplation. The Punjab has a local central banking system and though sooner or later it, too, will have an Apex Bank, no definite proposal for the establishment of such a Bank has yet matured. A provincial union has, however, been recently started which will work as a financial federation for the local banks in the province and facilitate mutual aid between them till an Apex Bank comes into being.

The constitution of Central Banks is not uniform, but the existing Banks may be classified under three general heads :—(1) Banks of which the membership is confined to individuals or where societies are admitted as members on exactly the same footing as individuals, (2) Banks of which the membership is confined to societies, and (3) Banks which include societies and individuals as their members and secure to societies separate representation on the Board of Directors. The bulk of the Central Banks are of the mixed type and there are hardly any of them which now adhere to the old capitalist constitution. The federal type is theoretically the best, but the paucity of the resources of the constituent primary societies, the lack of personnel and the need for enlisting the support of the urban middle classes have all combined to make the mixed type the most popular in almost all provinces

Functions of Central Banks :—The functions of Central Banks are to balance the funds of Societies and to supply capital. But their duties are not limited to the provision of banking facilities only, but often include the organisation and supervision of societies. Hence where the Central Banks are not formed on a capitalistic basis, they perform the functions of supervision and control of the Societies affiliated to them, and in some Provinces they also organise new Societies and even take up the entire educational work now done by the Registrar. Usually the unit of area for Central Banks is fixed as coterminous with the whole of a revenue district, as the personnel necessary for its successful working may be difficult to secure in a smaller area. However, in different parts of the country we notice the existence of Central Societies for *talukas* and occasionally for smaller tracts. An important class of institutions included under the statistics of central societies are unions. These may be described as federations of societies which are maintained for supervision, either combined or not with the assessment or guarantee of loans to primary societies They do not, however, undertake banking business. These unions have a very restricted area of operations, within a radius of five to eight miles from a central village. They are accepted as integral parts of the provincial organization in Burma and the Central Provinces, in one case serving as a link between primary societies and the provincial bank and in the other between primary societies and local banks. The system has also been extended to Bombay and to Madras, though in the last named province no guarantee is undertaken by those bodies.

Organization and Propaganda :—It may be mentioned that in most of the provinces the work of organising and looking after the societies is done by the Registrar with the help of a staff of assistant registrars, auditors and other officers and a few honorary non-official workers. Where the Central Bank system has properly developed, the Directors of the Central Bank either themselves or through a paid agency organise societies and, as stated above, supervise their working. The number of honorary workers is steadily increasing and in some Presidencies there is a staff of specially-appointed honorary organisers who regularly assist the Registrars. The activities of the honorary workers are often, however, spasmodic and unorganized, and in most of the major provinces the need has been felt for some co-operative institution which will co-ordinate and systematize the efforts of non-official workers, and place them on a responsible basis. The objective is to have the movement directed and controlled through self-governing representative bodies like organisation societies or federations on the lines of similar institutions in Germany, England and Ireland. Such institutions carry on active educational propaganda, and through the agency of local committees and groups of workers, assist in the organization of new societies and attend to their supervision. Arrangements can also be possible for the carrying on the audit of societies—for which Government cannot continue to increase the official staff to an unlimited extent—on payment of some fixed contributions. Finally, such federations should have the final voice in the determination of policy, and subject to the statutory powers of the Registrar gradually take over the control of the co-operative organization in a province. In the Central Provinces, there has been for some years a federation of Co-operative Banks and Societies which promises to develop into a co-operative organising and controlling agency. The federation provides a regular and efficient system of supervision, audit and control, arranges for the training of the federation staff, attempts to secure uniformity of practice among co-operative institutions and to promote their interest and fosters the spread of co-operation by active propaganda. A Provincial Union has also been started in Madras, but its objects are mainly educational and propagandist. Its activities are at present confined to the issuing of co-operative journals and the holding of conferences. Its constitution and its lines of work have now been revised so as to make it the central self-governing organization in the movement. A Central Institute to focus the efforts of co-operative workers and to carry on propagandist work was established in Bombay in 1918. The objects of this institution are to develop the movement in the Presidency, by promoting the study of co-operation and by co-ordinating the activities of several existing propagandist and organization agencies. The Institute has no powers of control, though it is expected to ascertain and represent the views of co-operators on questions affecting the movement. Organization will be undertaken primarily in the City of Bombay. The activities of the Institute in the mofussil are carried on

through its three divisional branches and some of these have already done much to educate public opinion on the aims and ideals of the movement. In Bengal, a similar propagandist organization has been started with identical aims. The Society has undertaken much of the educational and propagandist work hitherto performed by the Co-operative Department, and has assisted in the organization of co-operative stores among students in colleges. It has opened branch centres and projected a comprehensive scheme for the training of members of village societies and their Secretaries. A federation with a constitution more or less similar to that of the Central Provinces Federation is also in existence in Bihar and Orissa, while in the Punjab a provincial union has been organized for conducting the audit of primary societies and undertaking general propagandist work. In Burma, the audit of primary societies is conducted by a central committee consisting of important Departmental officials and representatives of co-operative institutions. This also assists in the organization of the Provincial Conference and acts as an advisory body to the Registrar. Organization, supervision and propaganda are furthered by district federations of unions of primary societies. These are all recent developments and it is still too early to forecast on what lines the transfer of control to representative co-operative agencies will be carried out.

Other forms of Co-operation.—After the passing of the amended Co-operative Societies Act the application of co-operation to purposes other than credit was greatly extended, but it is only during the last few years that a general demand for producers, and consumers' purchase and sale co-operative societies has exhibited itself. Before the year 1918-19, there were only a few store societies all over the country. In all provinces, particularly in Madras, some beginning had been made in the direction of distributive co-operation among the middle classes, while in Bengal and the United Provinces some attention had been devoted to the starting of stores for students living in hostels attached to Colleges. The movement has, however, now begun to obtain popular favour in view of the increasing prices of the daily necessaries of life, and the profiteering which assumed serious proportions at the close of the War. Co-operators in the provinces of Madras, Bombay, and the Punjab have attempted earnestly to tackle the evil by organizing supply unions, store societies, and distributive departments attached to credit societies, and in all the three provinces some steps are contemplated for obtaining cheap, wholesale supplies for the various distributive organizations. A Wholesale Society is projected in Bengal. In Madras the premier store works as a wholesale supplier to the smaller stores.

In some Provinces efforts have been made to revive the ancient handicrafts of the country and cottage industries by organising co-operative societies for the workers. Many of these societies merely provide cheap credit, but in some places they undertake the supply of raw material and the sale of manufactured goods. An important industry which flourished in India before the introduction of machinery was handloom weaving and efforts have been made to revive it by the formation of productive co-operative societies of handloom weavers. Most of the weavers' societies are not merely credit societies, but undertake the purchase of good yarn for members, and in some cases have store branches to sell the cloth produced by them. They have also been instrumental in introducing improved looms and methods amongst the conservative weaving classes. Other industrial societies to be found in very small numbers here and there are those for "gaolees" or milkmen, dyers, basket and brass workers in the Central Provinces, "Chammars" and "Dhers" in Bombay and Punjab, lacquerware workers, carpenters, wood carvers, blacksmith and potters. The Indian Industrial Commission in the course of their inquiries devoted some attention to the development of small and cottage industries and the possibility of reviving them by the introduction of co-operation. Their recommendations on this subject are not very definite. State loans for purchase of costly plant or machinery are, however, recommended, and emphasis is laid on the necessity of arranging facilities for the marketing of products of home industries. The first step to industrial co-operation is to be taken by familiarizing workers with the principles of co-operative credit, though later on separate non-credit institutions would become necessary. Suggestions are made for technical guidance to workers, and the local departments of industries are advised to keep workers constantly informed about the demands of the markets. Organization of industrial societies is to be a function of local departments of industries, but as these will be engaged with problems of big industries, it is doubtful of the cottage and small industries will have much scope for development under the new regime.

An interesting development of recent years in the provision of housing through co-operative societies. A good number of Housing Societies have been started in Bombay City and also in a few other centres. They are organized on the co-partnership system, under which the Society owns the houses and lets them to members at fixed rents. The scheme is feasible for such section of the middle classes as can provide a certain proportion of the initial capitals. Tenants ownership societies have also been started. There are some Building Societies in Madras and a few more in Mysore, but their activities are confined mainly to the provision of capital for building schemes and only occasionally extend to the joint purchase of land or of building materials.

The province of Burma is a pioneer in the matter of cattle insurance, and to support the village insurance societies which have been started in the province, there has been organized a central re-insurance society, which receives some financial backing from Government. In other provinces co-operative insurance for cattle has made only slight progress with the exception of the Punjab where the movement has developed enough to necessitate the starting of a reinsurance society.

Agricultural Co-operation.—Agricultural societies have until recently been engaged only

in supplying cheap credit to their members, but there are various other fields of work to which they may extend their activities. Grain Banks have, in some provinces, been started with advantage, receiving deposits in kind and allowing these to accumulate to be sold at profitable rates or distributed to the members in times of scarcity. Such banks have been started in Bombay, Madras, and Bengal, Mysore and Coorg. Societies on a similar principle for the storage of fodder may assist in solving what is likely to become in the near future an important problem in rural economy. Another direction in which the co-operative principle is being adopted is the starting of societies for purchase of and distribution among members of good unadulterated seed. A number of small seed societies have been organized in the Bombay Presidency, and in the Central Provinces and Berar, the work appears to have been particularly well organized. Societies for the co-operative purchase and sale of manure will also prove a great boon, and a few such stores have been established in Madras, Bengal and Bombay. In the Punjab and in Madras the supply of agricultural requisites has been undertaken either by the credit societies on the commission-indent system or special supply unions are organized for bulky orders, making contracts, distributing goods, and collecting payments.

The joint sale of produce are becoming popular as co-operative credit thrives and agriculturists become less dependent on local traders. While Burma led the way by starting societies for the joint sale of paddy, the most interesting developments in the direction have taken place in Bombay. Societies for the sale of agricultural commodities, chiefly cotton and jaggery have been started in several districts in the Deccan and the Karnatak. This aspect of co-operation has lately attracted considerable attention and attempts similar to those made in Bombay are contemplated in Madras and the Punjab. It will indeed be a great achievement if these efforts are successful and the cultivator obtains adequate returns for his produce. At present he buys in the dearest market and sells in the cheapest. But if co-operative purchase and sale show good progress, his economic position will be much improved. Apart from separate societies for the purpose, credit societies and central banks, in many parts of the country arrange for the joint sale of produce. In some places credit societies undertake the joint purchase of agricultural implements for members, while in others separate registered societies are started for the purpose. In some provinces in Upper India, this work is performed by central Banks for the Societies affiliated to them.

Efforts have been made in some parts of the country to solve the problem of milk-supply—to reduce the price and increase the purity—by starting co-operative dairies, composed either totally of gaolis or milkmen or the producers and the consumers together. Co-operative creameries and ghee producing societies have also been started in one or two provinces. Another interesting development is the starting of cattle-breeding societies in the Central Provinces and elsewhere. It is anticipated that these societies will assist in supplying the keen demand that exists for bulls of good stock. In several provinces there are Societies for rice-hulling, the manufacture of jaggery and for lift irrigation. Ginning on co-operative lines has also been attempted. An interesting experiment is the starting in the Punjab of societies for the consolidation of small and scattered holdings. These propose to regroup and reallot the holdings of members, and if this voluntary action proves sufficient for the purpose, one of the gravest evils of modern India agriculture will be solved without the aid of State help or legislation.

Government has of late made attempts to bring the co-operative movement in close touch with the Agricultural Department. Co-operation has already been successful to a considerable extent in redeeming the chronic indebtedness of the agriculturist, but if the improvement in his economic condition is to be permanent it is essential that he should be prevailed upon to adopt improved methods of production. The Agricultural Department does undertake propagandist work with this object, but its efforts have not proved as successful as they ought to be. A co-operative society provides an effective agency for reaching the agriculturist, and in many places societies have been the means of bringing home to him the need for improved methods and have been made the centres for the propagandist activities of the Agricultural Department and District Agricultural Associations. As a result, a few societies have been enterprising enough to purchase modern agricultural implements, and the machinery recommended by the Department and to use the proper manures and the certified varieties of seeds. "Wherever agriculture and co-operation have experienced the assistance which each can derive from association with the other they are fast developing a truly organic connection."

Committee on Co-operation in India.—In July 1914, the Government of India issued a lengthy Resolution on co-operation in India, surveying its progress in the country during the last ten years. It particularly emphasised the urgency of a proper financial organisation of societies and stated that "the responsibilities introduced by the addition to the co-operative organization of the central and provincial banks are of a serious character. To supervise the relations of such institutions with the money market on the one hand, and with their constituent societies on the other, is a task which requires a considerable degree of technical skill, and the administration of the whole co-operative movement in the stages above that of the individual society is a matter which must in the immediate future engage the serious attention of Government and of the people." In October, the Imperial Government appointed a Committee under Sir Edward Maclagan to examine whether the movement especially in its higher stages and in its financial aspect was progressing on sound lines and to suggest any measures of improvement which seemed to be required. The enquiry was to be directed primarily to an examination of such matters

as the constitution and working of Central and Provincial Banks, the financial connection between the various parts of the co-operative organization, the audit, inspection, and management of all classes of societies, and the utilization of the reserve funds. The scope of the enquiry was, however, in no way rigidly limited by the Government of India In its report, which was issued in September 1915, the Committee stated that it had not confined its enquiries to the subjects referred to it, for it had to recognise that the financial welfare of the higher stages of the co-operative system was largely based on the soundness of the foundation.

Government Action on Committee's Report.—The minor recommendations made have already been given effect to, but the opinions of the Local Governments were invited on the important ones. These opinions were published by the Government of India in September 1917. The Government of India has now passed orders on the recommendations in the light of the opinions of the Local Governments. The views of the Local Government differ widely and clearly show that a uniform system cannot be introduced in provinces with diverse conditions. The prescribed standard of fluid resources is condemned by some provinces, others object to the use of the Reserve Funds by societies in their own business, and a majority disapprove of the proposed appointment of an expert co-operator with the Government of India, while practically all approve of a summary process of recovery for the dues of members of societies in liquidation. Several provinces have already decided to take action on such of the recommendations as are approved of by the Registrars and are suitable to local conditions, and the co-operative organization in most provinces has been modified more or less on the lines suggested. With a view further to elicit opinion on the recommendations, a special conference of the Registrars was convened in August 1918, to which all the Registrars and a few selected non-official co-operators were invited. The Conference passed several important resolutions, adopting the Committee's suggestions about the utilization of reserve funds and the acceptance of savings deposits by primary societies and disapproving generally of the recommendation about the standard of fluid resource to be maintained by central institutions The Conference also had under consideration the suggestion made by the Committee on Co-operation that as the financing of the movement involved grave difficulties which baffled solution unless the discounting of pro-notes arranged through an Imperial State Bank or the several Presidency Banks, a careful examination of the question was immediately called for. A proposal was made for the appointment of an expert Committee, but the Government of India have practically shelved it by insisting that they would assemble the Committee at some date convenient to them.

Effect of Crisis on Co-operation.—It is hardly possible to appreciate the effect of the co-operative movement in enabling the agriculturists to resist the rigours of a famine as also to judge the reaction of the latter on the co-operative organisation. For, after the introduction of the co-operative movement in India, the country has not been affected by any widespread famines like those through which the greater portion of the country passed in 1898-1900. The agricultural season of 1918-19, however, put the co-operative organisation in most provinces to a very severe test and the reports for the next few years should afford some indication of the resisting power of the co-operative organization. There has occasionally been scarcity verging on famine in Bombay, Bengal, and the Punjab and the United Provinces but in neither of the two provinces was the distress sufficiently crushing or widespread to render the assistance provided by the societies inadequate for the needs of members. In the Central Provinces, owing to the drying up of recoveries and the issue of large advances to agriculturists to tide over a bad season, the furtherance of the movement was seriously depleted and the Apex Bank was able to meet its liabilities only with the financial assistance of Government. In Bengal and the Punjab, the return of favourable seasons has averted any breakdown of the system, but the same cannot be asserted of the United Provinces, where there appears to be some danger of the strain not being quite successfully withstood. With a better appreciation of the dependence of the agriculturist on seasons, and a more systematic management of the funds of central societies it is anticipated that in future the situation arising out of a failure of rains will be satisfactorily met. In 1913 and the following months practically the whole of the country was subjected to a banking crisis of considerable magnitude, but a marked feature of this crisis was a tendency to withdraw deposits from non-co-operative institutions and place them in co-operative banks. The outbreak of the War brought another set of influences into play and there was a temporary tendency to withdraw deposits and a temporary cessation of new deposits. The disturbance was not serious except in two or three provinces and by the end of the year 1914-15, the situation became practically normal. In two of the provinces where the situation caused some anxiety owing to the cessation of fresh deposits in Central Banks, the Government sanctioned advances to the extent of Rs. 5,00,000 to Central Societies to be utilized in case of urgent loans to agricultural societies or to meet withdrawals of deposits. On the whole, therefore, the movement appears to have stood the test of the War much better than might have been expected. While, therefore, the co-operative movement as a whole has been the cause of little or no anxiety to the public as well as to the State, Co-operative institutions in several provinces have borne their share of the burden of the War to the best of their ability. Large subscriptions to the War Loan and relief funds were made in Bengal, Bombay, the Central Provinces, the Punjab and the United Provinces.

Social Reform.—Co-operation has, in some places, stimulated the desire for education and members of rural societies have been known even at advanced ages to receive the

elements of education to enable them to put their signatures on the society's papers, and to take a lively interest in the internal work of their societies. In Bombay, night schools for adults have been started with the aid of a splendid donation made by Sir Vithaldas D Thackersey, while in the Punjab, Bihar, Bengal and elsewhere much expenditure on education is incurred by co-operative institutions themselves. There are not few cases where a society has set its face against drunkenness, expelled members notorious for their intemperate habits and has in other ways worked for a better morality by insisting on a high standard of life. Societies have occasionally condemned excessive and even heavy expenditure on marriages, and have thus indirectly trained members to the habit of thrift. Liquidation of old debts again has been rendered possible to a great extent and many an agriculturist who was formerly in a state of chronic indebtedness has been relieved of all his debts and freed from the necessity of incurring new ones. Credit has been much cheapened and it is now possible for the agriculturist to borrow at 9 to 18 per cent. what he could not borrow at less than 20 to 75 per cent. formerly. It has been calculated that in interest alone the agriculturists of India, by taking loans from Co-operative Credit Societies instead of from the village money-lenders, are even now saving themselves from an unnecessary burden of at least 20 to 30 lakhs of rupees. The village rates of interest have naturally gone down considerably and the Sowkar is, in most places, not the terror and the force that he was. Business habits have been inculcated with the beneficial result that the agriculturist has learnt to conduct his own work more efficiently. Thrift has been encouraged and the value of savings better appreciated. Participation in the management of societies has brought home to the members the important lessons of self-help and self-reliance ; but the most important achievement of co-operation has been the instilling of a sense of communal life—a feeling of "all for each and each for all" amongst the members of a co-operative body. If these signs become as common as they are now rare, and if, over and above the economic benefits achieved by it, co-operation succeeds in its true aim—the building up of the character of the people and the promotion of their welfare by the inculcation of the ideas of thrift and the principles of self-help, and, above all, by showing the wisdom of mutual help and brotherliness amongst neighbours—a resuscitation of rural life such as is conducive to more quickened national progress will not be far off.

The following statements show the progress of the Co-operative movement in different provinces, and contain some information about their detailed working till the end of the official year 1919-20 :—

Provinces.		Agricultural Societies.		Non-agricultural Societies.		Central Societies.		REMARKS.
		Credit.	Non-credit.	Credit.	Non-credit.	Banks.	Unions.	
Madras ..	Number ..	4,156	62	478	163	(1) 50	(2) 136	(1) Includes Provincial Bank. (2) Includes Provincial Union.
	Membership ..	2,31,101		96,347		6,203	5,540	
	Capital Rs. ..	1,59,68,222		63,70,515		1,71,49,869	....	
Bombay ..	Number ..	1,993	(6) 9	273	125	(7) 14	64	(6) Exclusive of 4 cattle insurance societies.
	Membership ..	1,55,906		76,061		5,987	377	(7) Includes Provincial Bank.
	Capital Rs. ..	1,10,39,323		84,37,070		65,78,961	....	
Bengal ..	Number ..	(3) 4,920	(4) 57	124	2 6	(5) 65	6	(4) Exclusive of 1 cattle insurance society.
	Membership ..	1,57,159		50,676		9,119	221	(5) Includes Provincial Bank.
	Capital Rs. ..	1,11,12,366		47,85,753		1,23,63,445	....	
Bihar and Orissa ..	Number ..	(8) 2,755	19	69	65	(9) 39	(10) 64	(8) Includes 3 grain banks, and 1 agricultural association.
	Membership ..	79,732		16,360		5,067	3,056	(9) Includes Provincial Bank.
	Capital Rs. ..	38,08,758		7,52,773		45,38,857	....	(10) Includes Provincial Federation.
United Provinces .	Number ..	(13) 3,488	10	135	13	65	10	(13) Exclusive of 1 cattle insurance society.
	Membership ..	89,522		7,564		7,344	103	
	Capital Rs. ..	48,13,537		5,31,572		60,69,651	....	

Provinces.		Agricultural Societies.		Non-agricultural Societies.		Central Societies.		Remarks.
		Credit.	Non-credit.	Credit.	Non-credit.	Banks.	Unions.	
Punjab	Number	12(a) 6,614	217	70	170	(12b) 80	....	(12a) Exclusive of 22 cattle insurance societies.
	Membership	1,82,516		14,891		7,476	....	(12b) Includes 1 weavers union.
	Capital Rs.	1,78,46,207		5,55,209		92,42,168	....	
Central Provinces & Berar.	Number	4,421	35	64	35	(11) 35	(12) 295	(11) Includes Provincial Bank.
	Membership	71,623		1,682		73,938	5,885	(12) Includes Provincial Federation.
	Capital Rs.	93,55,266		3,40,764		1,19,86,514	....	
Burma	Number	(14) 3,319	108	157	12	(15) 11	(16) 409	(14) Exclusive of 381 cattle insurance societies.
	Membership	78,241		16,869		4,069	3,573	(15) Includes Provincial Bank but excludes 1 Central Reinsurance Society.
	Capital Rs.	1,26,54,705		24,24,976		97,77,421	....	
Assam	Number	412	....	23	22	15	3	.....
	Membership	18,520	....	5,517		1,228	53	.....
	Capital Rs.	5,15,469		4,20,980		4,80,403	....	.....
Coorg	Number	(17) 93	....	5	1	....	....	(17) Includes 3 grain banks but exclusive of 10 cattle insurance societies.
	Membership	4,291	....	519		....	....	
	Capital Rs.	1,62,396	.. .	12,219		....	....	

Provinces.		Agricultural Societies.		Non-agricultural Societies.		Central Societies.		Remarks.
		Credit.	Non-credit.	Credit.	Non-credit.	Banks.	Unions.	
Ajmere Merwara	Number	412	13	4	15	6	1	
	Membership	12,084		4,013	....	1,244	11	
	Capital Rs.	19,00,531		2,55,771	....	16,95,784	....	
Hyderabad Administered Area.	Numbers	....	....	3	1	..	..	
	Membership	....	...	30	6	. ..	....	
	Capital Rs.	....	. .	23,608		..	....	
Delhi	Number	12	....	....	13	.. .	....	
	Membership	201	....	....	178	..	....	
	Capital Rs.	9,794	....	.. .	5,372	....	....	
Hyderabad	Number	1,120	....	91	31	10	....	
	Membership	24,408	....	4,820		1,697	....	
	Capital Rs.	31,87,133		4,48,010		27,43,669 (18)	....	
Mysore	Number	1,117	45	137	85	18	....	(18) Includes Provincial Bank.
	Membership	51,942		38,243		2,494	....	
	Capital Rs.	23,83,443		34,13,791		20,02,856	....	
Baroda	Number	412	33	39	3	4	....	
	Membership	12,734		2,384		619	....	
	Capital Rs.	14,12,463		3,11,415		7,25,612	....	
Bhopal	Number	361	....	....	...	4	4	
	Membership	5,132	....	....	. ..	541	61	
	Capital Rs.	4,20,093	....	....	....	1,88,510	....	
Total	Number	35,605	694	1,672	990	400	992	
	Membership	1,175,109		339,430		127,026	16,880	
	Capital	9,64,89,705		2,90,37,716		8,85,43,720	....	

Class of Societies.	No.	Membership.	Share capital.	Loans and deposits from					Reserve Fund.	Total Working Capital.	Profit for the year.
				Members.	Non-members.	Societies	Provincial or Central Banks.	Government.			
Provincial Banks	7	5,027	22,00,066	1,55,72,867		19,27,218	37,22,466	*Nil.*	7,95,356	2,42,17,973	3,08,036
Central Banks	393	1,21,999	95,42,213	3,56,86,892		42,99,592	1,08,89,881	12,40,496	26,66,673	6,43,25,747	14,42,642
Supervising and Guaranteeing Unions	992	16,880	..	..	..	..	..	..	..	..	..
Agricultural Societies ..	36,299	11,75,109	1,22,26,567	58, 0,595	63,34,524	6,78,089	5,63,46,982	21,00,910	1,28,82,039	9,64,89,706	30,78,118
Non-agricultural Societies	2,662	3,39,430	1,00,30,285	78,43,702	65,81,253	4,89,868	21,10,009	3,36,248	16,37,351	2,90,37,716	11,63,877
Cattle Insurance Societies (including two Central re-insurance Societies ..	418	6,609	..	..	..	..	..	..	..	..	..

Total number of societies—40,772.

Total membership of primary societies—15,21,148.

Total working capital (in round figures)—Rs. 21,40,71,000.

The Women's Medical Service for India.

This Service is included in the National Association for supplying female medical aid to the Women of India, generally known as the Countess of Dufferin's Fund and is administered by the Central Committee of that Fund. The Government of India has so far allotted the sum of £10,000 per annum towards its maintenance. The present sanctioned cadre is twenty-five first class medical women, but it is hoped that this number will shortly be augmented. Recruitment of the service is made (*a*) in India by a medical sub-committee of the Central Committee which includes the Director-General, Indian Medical Service, the Honorary Secretary to the Central Committee, and a first-class medical woman; (*b*) in England, by a sub-committee, consisting of a medical man and two medical women conversant with conditions in India, to be nominated by the Home Committee of the Countess of Dufferin's Fund. These sub-committees perform the duties of a medical board examining candidates for physical fitness, and for return to duty after invaliding.

The Central Committee determines what proportions of the members of the Service is to be recruited in England and in India respectively. In the original constitution of the Service, duly qualified medical women who are in the service of, or who have rendered approved service to, the Countess of Dufferin's Fund, are to have the first claim to appointment, and thereafter special consideration is to be paid to the claims of candidates who have qualified in local institutions and of those who are natives of India.

Qualifications.—The qualifications are that the candidate must be (*a*) a British Subject resident in the United Kingdom or in a British Colony or in British India, or a person resident in any territory of any Native Prince or Chief under the suzerainty of His Majesty exercised through the Governor-General of India or through any Governor or other officer subordinate to the Governor-General of India. (*b*) Must be between the ages of twenty-four and thirty at entry. (*c*) She must be a first-class Medical Woman, *i.e.*, she must possess a medical qualification registerable in the United Kingdom under the Medical Act, or an Indian or Colonial qualification registerable in the United Kingdom under that Act: but this condition does not apply at the original constitution of the Service to medical women in charge of hospitals who, in the opinion of the Central Committee, are of proved experience and ability. (*d*) The candidate must produce a certificate of health and character. But the Central Committee reserves the power to promote to the service ladies not possessing the above qualifications, but who have shown marked capacity. Members of the Service are required to engage for duty anywhere in India or Burma. Those recruited in England serve for six months, and those recruited in India for three months, in a General Hospital of the Province to which they are deputed. After this period of probation has been satisfactorily passed their appointments are confirmed. The services of Members may be lent to Local or Municipal bodies, or to special institutions, which may be responsible for whole or part of the pay.

Pay.—The rates of pay are as follows:—During probation Rs. 350 per month, thereafter Rs. 400 up to the end of the 4th year: Rs. 450 from the 5th to the 7th year; Rs. 500 from the 8th to the 10th year; and Rs. 550 after the 10th year. But no member can be confirmed in the 400 rupee grade unless she has passed an examination in such vernacular as the Provincial Committee shall prescribe, within one year of her appointment. In addition suitable quarters are provided free of rent: or a house rent allowance to be determined by the Provincial Committee may be granted in lieu of it.

Members of the Service are permitted to engage in private practice provided it does not interfere with their official duties, and the Provincial Committee has the power to determine whether such duties are thus interfered with. Except in very special cases retirement is compulsory at the age of forty-eight. A member whose appointment is not confirmed, or who is dismissed, is granted an allowance sufficient to pay her passage to England.

Leave Rules.—(*a*) Casual Leave, which is occasional leave on full pay for a few days, and is not supposed to interrupt duty. (*b*) Privilege Leave, which is leave on full pay and is meant to provide a month's holiday in the year. If it cannot be granted during the year, it can be accumulated up to a limit of three months. (*c*) Furlough, at the rate of two months for each year of duty, the latter including privilege leave and casual leave. First furlough is not granted till after four years of duty, and more than eight months furlough is not granted at one time. Study leave may also be granted not exceeding three months at a time and up to twelve months during the whole service. (*d*) Sick leave, up to a maximum of two years. (*e*) Extraordinary leave at any time at the discretion of the Central Committee. When on furlough or sick leave the allowances are half the average monthly pay of the six months presence on duty immediately preceding the taking of the leave. There are no allowances during extraordinary leave. A Lady appointed in England receives a sum of £70 to cover her passage and incidental expenses. There are also allowances to cover the cost of journeys by rail and road.

There is also to be a Provident Fund, each member contributing monthly thereto five per cent. of her salary, the Association contributing an equal amount, and each subscriber's account being granted interest on the amount standing to credit at the rate of 4 per cent. per annum, "or at such rate as the Central Committee can invest without risk to the funds of the Association."

The Member loses her contributions if she resigns (except on account of ill-health) before completing five years' service, or in the event of dismissal. On retirement after approved service the sum which has accumulated to the credit of the subscriber is handed over to her.

The Lady Hardinge Medical College was opened by His Excellency Lord Hardinge on February 17th, 1916. This College was established in commemoration of the visit of their Imperial Majesties to Delhi in 1911, with the object of providing a complete medical education for women of India. The initial cost was defrayed by subscriptions collected by the late Lady Hardinge mainly from Indian Princes and Chiefs. After her death in 1914, it was decided to complete the institution as a memorial to Lady Hardinge.

The College and Hospital buildings together with hostels for medical students and nurses, and residences for the medical and teaching staff, are grouped in a large compound, situated in the Imperial enclave in close proximity to the city of Delhi. The College buildings consist of three blocks containing Library, Museum, Lecture Rooms, Offices and Laboratories. Separate hostels with kitchens and dining rooms are provided for Hindu, Muhammadan, Sikh, Parsee, Indian Christian and European students. The total cost of the completed buildings and equipment will be about 25 lacs. The College is supported by a grant from Government. It is designed to accommodate 100 students and to provide a full medical curriculum as required by the General Medical Council of Great Britain. At present it is affiliated in the Faculty of Medicine of the University of the Punjab up to the First Professional Examination. The staff are all women.

Principal and Professor of Medicine, Miss K A. Platt, M D. (LOND.), Women's Medical Service, India; Professor of Surgery, Miss H. M. Franklin, M.B B S. (LOND.); Vice-Principal and Professor of Gynæcology and Midwifery, Miss C. L Houlton, M D., B S., (LOND.) Cert. Trop. Medicine (LOND.), Women's Medical Service, India; Professor of Pathology, Miss M. B. Stoddon, L.R C P, M.R.C S; Professor of Anatomy, Miss M. C. Murphy, M.B (CAL.), L.R.C.P. (LOND.), M R C S. (ENG.), Women's Medical Service, India; Professor of Physiology, Miss M. R. N. Holmer, M A. (DUBLIN) Nat. Sc. Tripos Class I (Cantab) Diploma (Distinction, Oxon.); Professor of Chemistry, Miss A. M. BAIN, M.A., B. SC, (Aberdeen), Special Distinction in Chemistry; Professor of Botany and Zoology, Miss Hett; Professor of Mathematics and Physics, Miss P. M Borthwick, B Sc (LOND.), M. Sc. (Bristol), Warden and Secretary, Miss M. W. Jesson, Maths Tripos (Cantab.).

The Lady Hardinge **Training School for Nurses.**—Attached to the Hospital which is designed to hold 168 beds is a training school for nurses and midwives. It is intended to train Indian girls as nurses, who will be available for nursing in private families as well as in hospitals Nursing Superintendent, Miss L. E. Mackenzie.

THE COUNTESS OF DUFFERIN'S FUND.

The National Association for supplying female medical aid to the women of India at once one of the most efficient as it is among the most useful and benevolent institutions in India, is the outcome of the work of the Countess of Dufferin and Ava during the time of her husband's Viceroyalty. The late Queen Victoria drew the attention of the Countess, on the departure of the latter for India, to the question of supplying medical aid to women in this country, and asked her to take a practical interest in the subject. As the result of her enquiries she found that, though certain great efforts were being made in a few places to provide female attendance in hospitals, training schools, and dispensaries for women, and although missionary effort had done much, and had indeed for many years been sending out pioneers into the field, yet taking India as a whole, its women, owing to the "purdah" system, were undoubtedly without that medical aid which European women were accustomed to consider as absolutely necessary. In the Countess' own words written in 1886 after the movement had been started: "I found that even in cases where nature, if left to herself, would be the best doctor, the ignorant practice of the so-called midwife led to infinite mischief, which might often be characterised as abominably cruel. It seemed to me, then, that if only the people of India could be made to realise that their women have to bear more than their necessary share of human suffering, and that it rests with the men of this country and with the women of other nationalities to relieve them of that unnecessary burden, then surely the men would put their shoulders to the wheel and would determine that wives, mothers and sisters, and daughters dependent upon them should, in times of sickness and pain, have every relief that human skill and tender nursing could afford them.....I thought that if an association could be formed which should set before itself this one single object, to bring medical knowledge and medical relief to the women of India, and which should carefully avoid compromising the simplicity of its aim by keeping clear of all controversial subjects and by working in a strictly unsectarian spirit, then it might become national, and ought to command the support and sympathy of every one in the country who has women dependent upon him."

Initiation of the Scheme.—Lady Dufferin's plans were warmly received by the public all over India. The scheme was drawn out and published in the different dialects. The association was named "The National Association for Supplying Female Medical Aid to the Women of India," and the money for its support, as it was received, was credited to the "Countess of Dufferin's Fund." The affairs of the Association were managed by a central committee of which the Countess of Dufferin during her stay in India was President. Branch Associations, each independent for financial and administrative purposes, but linked with the central committee, were formed in most parts of the country, and the work may be said to have started from August 1885. The objects of the Association are thus set-forth in its publications.—I. Medical tuition, including the teaching and training in India of women as doctors, hospital assistants, nurses, and midwives. II. Medical relief, including the estab-

lishing under female superintendence, of dispensaries and hospitals for the treatment of women and children; the opening of female wards under women superintendents in the existing hospitals and dispensaries; the provision of female medical officers and attendants for existing female wards; and the founding of hospitals for women where special funds or endowments are forthcoming. III. The supply of trained female nurses and midwives for women, and nurses for children in hospitals and private houses.

Within four years from its inception there were in existence twelve hospitals for women and fifteen dispensaries, most of which were officered by women, and all more or less closely connected with the Association. From the subscriptions collected there was enough to set aside a substantial sum as an endowment fund; and also six medical, twelve nursing and two hospital assistant scholarships had been provided for.

Growth of Scheme.—The first regular training school in India for the instruction of native pupils in medical and surgical nursing, and in midwifery was established in 1886 by the Bombay Branch of the Association in connection with the Cama Hospital in Bombay. This is a civil institution under Government management, and is solely for women and children of all castes and denominations. In connection therewith is the Allbless Obstetric Hospital and the Jaffer Sulciman Dispensary for women and children. The present physician-in-charge is Miss A. Turner Watts, M.D. (Lond).

There are thirteen Provincial Branches working under the central committee; and attached in some manner, or affiliated to the provincial branches, there are about one hundred and forty Local and District Associations or Committees engaged in furthering the work of the Association. There are one hundred and fifty-eight hospitals, wards, or dispensaries of various kinds for the medical relief of close on one and a quarter million women and children; and the value of the institutions engaged in the work of the Association was estimated at over 56 lakhs of rupees.

Annual Report.—The Report of the Association is published annually, and can be obtained either from the Superintendent of Government Printing, Calcutta, or from the leading booksellers, the price being one rupee and eight annas. The map of India published therewith shows the women's Hospitals officered by women in India. The Honorary Secretary is Colonel R. Heard, I.M.S. and the Joint Secretary, Dr. M. I. Balfour, M.B., Women's Medical Service. The Headquarters of the Central Committee are Viceregal Lodge, Delhi and Simla.

NURSING.

Whilst India cannot show the complete chain of efficiently-nursed hospitals which exists in England, there has been a great development of skilled nursing of recent years. This activity is principally centred in the Bengal, Madras, and Bombay Presidencies, where the chief hospitals in the Presidency towns are well nursed, and where large private staffs are maintained, available to the general public on payment of a prescribed scale of fees. These hospitals also act as training institutions, and turn out a yearly supply of fully trained nurses, both to meet their own demands and those of outside institutions and private agencies. In this way the supply of trained nurses, English, Anglo-Indian and Indian, is being steadily increased. In Bombay the organisation has gone a step further, through the establishment of the Bombay Presidency Nursing Association, c/o St. George's Hospital, Bombay. This is composed of representatives of the various Nursing Associations in charge of individual hospitals, and works under the Government. The principle on which the relations of this Association with the Local Associations is governed is that there shall be central examination and control combined with complete individual autonomy in administration.

Nursing Bodies.—The Honorary Secretary of the Calcutta Nursing Association is Mr. R. A. B. Reynolds, the Presidency General Hospital. The address of the Mayo Hospital Nursing Association is in Strand Road. In **Madras** there is the General Hospital, with a staff of 62 nurses, the Government Maternity Hospital, the Caste and Gosha Hospital at Kilpauk, the Royappeta Hospital and the Ophthalmic Hospital.

Bombay Presidency.—The Bombay Presidency was amongst the first in India to realise the value of nursing in connection with hospital work. The first steps were taken on the initiative of Mr. L. R. W. Forrest at St. George's Hospital, Bombay, where a regular nursing cadre for the hospital was established together with a small staff of nurses for private cases. This was followed by a similar movement at the J. J. and Allied Hospitals and afterwards spread to other hospitals in the Presidency. Ultimately, the Government laid down a definite principle with regard to the financial aid which they would give to such institutions, agreeing to contribute a sum equal to that raised from private sources. Afterwards, as the work grew, it was decided by Government that each nursing association attached to a hospital should have a definite constitution, and consequently these bodies have all been registered as Associations under Act 21 of 1860. By degrees substantial endowments have been built up, although the Associations are still largely dependent upon annual subscriptions towards the maintenance of their work. The chief of these Associations are:—

St. George's Hospital Nursing Association. Hon. Secretary: F. B. Thornely, Esq. St. George's Hospital, Bombay.

J. J. Hospital Nursing Association. Hon. Secretary: W. Turner Green, Esq., Jamsetji Jijibhoy Hospital, Bombay.

Goculdas Tejpal Hospital Nursing Association. Secretary: J. P. Brander, Esq., I.C.S., Old Custom House, Bombay.

Cama Hospital Nursing Association. Hon. Secretary: H. C. B. Mitchell, Esq. Cama Hospital, Bombay.

Sassoon Hospital Nursing Association Hon. Secretary: Civil Surgeon, Sassoon Hospital, Poona.

Karachi Civil Hospital Nursing Association. Hon Secretary: G. Birch, Esq. Civil Hospital, Karachi.

Nasik Civil Hospital Nursing Association Hon Secretary: Civil Surgeon, Nasik Hospital, Nasik.

Ahmedabad and Lely Memorial Nursing Association. Hon. Secretary: Civil Surgeon, Ahmedabad.

Bijapur Civil Hospital Nursing Association. Hon. Secretary: Civil Surgeon, Bijapur

Belgaum Civil Hospital Nursing Association. Hon. Secretary: Civil Surgeon, Belgaum.

Ahmednagar Civil Hospital Nursing Association. Hon. Secretary: Civil Surgeon, Ahmednagar.

After further experience it was felt that it is undesirable to have a considerable number of detached and independent nursing associations, training and certifying nurses, without any common standard of entrance examination, or certification. It was therefore decided to establish the Bombay Presidency Nursing Association which came into existence in the year 1910. This is an Association formed partly of representatives of all affiliated associations and partly of direct representatives of Government, the Surgeon-General with the Government of Bombay always being the chairman. It is financed partly from the product of endowments and partly from contributions from the Government of India. If subsequently further funds are needed they are to be provided by contributions from the affiliated Associations.

The principle on which the Bombay Presidency Nursing Association works is a central system of examination, certification, registration and control. It is now the only nursing, examining, registering and certifying body in the Bombay Presidency. At the same time, the local associations retain entire charge of their local funds excepting Provident funds which have been transferred to the Central fund, and also entire control of the nurses when they are in their employment. Proposals are now before Government for absorbing the personnel of the local associations into a Presidency Nursing Association. This will not however affect the individuality of local associations which will continue to control their own funds and to exercise control over local establishments, subject in the latter case to such limitations as a revision of the nature in question will require.

The Association commenced its operations on the 1st April 1911. The institutions recognized under the by-laws for the training of nurses at present are—St. George's Hospital, J.J. Hospital, Cama and Albless Hospital, Bai Motlabai Hospital, Bombay; Huttesing and Premabai Civil Hospital, Victoria Jubilee and King Edward VII Hospital, Ahmedabad; Civil Hospital, Belgaum; Morarbhai Vrijbhukhandas Hospital, Surat; Karachi Civil Hospital, Karachi; Sassoon Hospital, Poona; State General Hospital, Baroda; and the following for the training of Midwives: M. V. Hospital, Civil Hospital, Surat; Victoria Jubille and King Edward VII Hospital, Ahmedabad; Bai Motlecbai Hospital, J. J. Hospital, Cama and Albless Hospital, St, George's Hospital, Bombay; Dufferin Hospital, Karachi; Sassoon Hospital, St. Margaret's Hospital, King Edward Memorial Hospital, Poona; Civil Hospital, Belgaum.

Provision for retiring allowances is made for all members on the basis of a Provident Fund and a Nursing Reserve has been established for employment in emergencies such as war, pestilence or public danger or calamity.

Address—The Secretary, Bombay Presidency Nursing Association, St. George's Hospital, Bombay.

Lady Minto Nursing Service.—In 1905, there was one organisation existing in the Punjab and the United Provinces called the Up-Country Nursing Association for Europeans in India, which was established in 1892. This Association carried out very useful work in certain parts of India but was hampered by want of funds. For this reason it was found impossible to extend their organization and the urgent need for a larger number of trained nurses at charges within the reach of all classes was much required. The late Lady Curzon worked energetically to provide an enlarged nursing organization, but principally for financial reasons, was unable before leaving India to bring her scheme to fruition. The Home Committee of the existing Association recognizing the need of expansion approached Lady Minto before she left England in 1905 and begged her assistance and co-operation. After much consideration and discussion with the Government of India, Lieutenant-Governors and Commissioners of Provinces, the present Association was established. In 1906 an appeal was made by Lady Minto to the public both in England and India to start an endowment fund. This appeal was most generously responded to. Each year the endowment fund has gradually increased, and with the assistance of a Government grant, homes for nurses have been established in seven Provinces of India and Burma, of which the original Association formed the nucleus. To avoid confusion with other Associations, the enlarged organisation, by request of the Home Committee, was named "Lady Minto's Indian Nursing Association," carrying on the same work as before, namely, that of selecting suitably trained nurses in England, and making the necessary arrangements for their transfer to India. Hon. Secretary, Colonel R. Heard, I.M.S., Simla; Hon. Secretary, Home Branch, Lieut-Col. Sir Warren R. Crooke-Lawless, C.B., C.I.E., C.B.E., LL.D., M.D, House Governor, Osborne, Isle of Wight.

Nurses' Organizations.—The Trained Nurses' Association of India and the Association of Nursing Superintendents of India are not Associations to employ or to supply nurses, but are organizations with a membership wholly of nurses with the avowed objects of improving and unifying nursing education, promoting *esprit de corps* among nurses, and upholding the dignity and honour of the nursing profession. The Associations have a membership of 202, including nurses trained in ten or more different countries, Europeans, Americans, New Zea-

anders, Australians and Indians. The Association of Superintendents was started in 1905 as the Association of Nursing Superintendents of the United Provinces and the Punjab, but by the next year its membership had spread over the country to such an extent that the name was changed to include the whole of India. The Trained Nurses' Association was started in 1908, and a monthly Journal of Nursing began to be published by the two Associations in February, 1910. The Associations have since become affiliated with the International Council of Nurses.

Below are given names of Officers of the Associations :—

Trained Nurses' Association of India.

President: Miss Darbyshire, R.R.C., L.M.N.A., Viceregal Lodge, Simla *Hon., Secretary, and Treasurer.* Miss Rawson, Palwal, S. Punjab.

Association of Nursing Superintendents.

Hon. Secretary and Treasurer : Miss Lamb S. Catherine's Hospital, Amritsar.

THE WOMAN SUFFRAGE MOVEMENT.

Within the abnormally short period of three and a half years the Woman Suffrage movement has risen in India, swept through the country sympathetically and achieved the political enfranchisement of women in two of its most progressive Provinces and in three Indian States.

Three fundamental causes have led to this remarkable success: first, the deep veneration that is given by the Hindu and Muhammadan religions to the feminine aspect of life equally with the masculine as shown by the importance of goddesses, by the necessity for the presence of the wife at all ceremonies performed by a Brahman, by the idea of the sacred mystery of womanhood implied by the purdah, and by the general veneration of motherhood. Secondly the time was psychological, for a new era was beginning for the Indian people by the introduction of a Scheme of Reforms in Indian government which was planned to give a basis of representative government on a much extended scale. The door was being opened to complete Self-government and only men were being invited to enter through it, although women compose half the people of the country and it had been by the joint efforts of men and women that the agitation for reform in the government had been made. The men and women of India were too awake and too just to allow this injustice to remain unredressed. Thirdly, the long and strenuous agitation for the vote by women in Britain and America and their recent victories had brought vividly to the consciousness of all educated Indian men and women the whole question of the inclusion of women in public life, and it was also a national and international necessity that Indian women should be given as high a status as women in other parts of the Empire.

Though the **Municipal franchise** had been granted to the women of the Bombay and Madras Presidencies over fifteen years ago it was so limited in numbers that it did not make a large impact on women's consciousness and indeed no protest was made when it was suddenly withdrawn from Madras women some years later. Over 1,700 women are qualified to vote for the Bombay Corporation and a fair percentage of these have polled at each election, and similarly in other Municipalities in that Presidency women have exercised their vote responsibly and intelligently. It was, however, only with the rise of the political agitation for Home Rule between 1914 and 1917 that women began to wake up to their position of exclusion by British law from any share in representative government. The internment of one of their own sex, Mrs. Besant, stimulated political activity and political self-consciousness amongst women to a very great extent. The moment for the ripe public expression of their feelings came when the Secretary of State for India came to India to investigate and study Indian affairs at first hand in 1917.

During the Hon E. S. Montagu's visit only one Women's Deputation waited on him but it was representative of womanhood in all parts of India, and it brought to his notice the various reforms which women were specially desirous of recommending the Government to carry out.

The first claim for women suffrage for Indian women was made in the Address presented to Mr. Montagu at this historic **All-India Women's Deputation** which waited upon him in Madras on the 18th December 1917. The section referring to enfranchisement merits full quotation:

Our interests, as one half of the people, are directly affected by the demand in the united (Hindu-Muslim Reform) scheme (I. 3) that "the Members of the Council should be elected directly by the people on as broad a franchise as possible," and in the Memorandum (3) that "the franchise should be broadened and extended directly to the people." We pray that, when such a franchise is being drawn up, women may be recognized as "people," and that it may be worded in such terms as will not disqualify our sex, but allow our women the same opportunities of representation as our men. In agreeing with the demand of the abovementioned Memorandum that "a full measure of Local Self-Government should be immediately granted," we request that it shall include the representation of our women, a policy that has been admittedly successful for the past twenty years in Local Self-Government elsewhere in the British Empire. The precedent for including women in modern Indian political life has been a marked feature of the Indian National Congress, in which since its inception women have voted and been delegates and speakers, and which this year finds its climax in the election of a woman as its President. Thus the voice of India approves of its women being considered responsible and acknowledged citizens; and we urgently claim that, in the drawing up of all provisions regarding representation, our sex shall not be made a disqualification for the exercise of the franchise or for service in public life.

The All-India Women's Deputation was organised by the women members of the Senate of the Indian Women's University, Hingne, Poona, namely, Mrs Sarala Devi Choudhuri, B.A., Mrs. M. E. Cousins, B. Mus, Mrs. Saralabai Naik, M.A., Mrs. Ramabai Nilkanth, B.A. and Mrs. Srirangamma, B. A. The additional members who took part in the Deputation and supported it were Mrs. Sarojini Naidu, Dr Miss Nagutai Joshi, Mrs. Besant, Mrs. Dalvi, Mrs, Chandrasekhra Iyer, Mrs. Guruswamy Chetty, Mrs. Lazarus, Mrs. Jinarajadasa, Mrs. Kibe, Mrs. Herabai A. Tata, Begum Hasrat Mohani, Mrs. Ranade, Lady Bose, Mrs. Sanjiva Rao, B.A. Mrs. U. Nehru, Miss Hemabai Petit. Mrs Sarojini Naidu acted as the spokeswoman and to her and three of the Deputation Mr. Montagu accorded a further private interview.

Immediately after this event a Resolution on Woman Suffrage appeared on the Agenda of the **Indian National Congress** for the first time at Calcutta, but it was withdrawn for want of time as it came at the end of the Congress. Following up the terms of the Suffrage request to Mr. Montagu the Women's Indian Association took up the direction of the Woman Suffrage work in India, and placed Woman Suffrage as one of the objects of the Association which up to then had been entirely of an educational character only. **The Women's Indian Association** is still the only organisation in India which has definitely identified itself with Woman Suffrage propaganda and the gaining of political equality for women. Its Headquarters are in Adyar, Madras, and it has 50 Branches and about 2,000 members.

This Association concentrated during the whole of 1918 on getting the public support of prominent political bodies for the inclusion of Woman Suffrage in any scheme of Reforms which might be drawn up for India. Requisitions were got up in April by its branches in Madras and Bombay asking the Madras and Bombay Provincial Councils to pass resolutions in favour of the removal of sex disqualification from the Reform Bill. These Resolutions were enthusiastically passed. The same happened later in the Andhra Provincial Conference and in the Malabar District Conference. In each case the requisitions were signed by a large number of women's societies and prominent women of the Presidencies, and the Resolutions were proposed and seconded in the Conferences by Indian women speakers.

The National Home Rule League (President, Mrs. Besant) and the Indian Home Rule League (President, Mr. Tilak) agreed to make woman suffrage a plank in their party platform. Woman Suffrage Resolutions were passed also by the Provincial Congress Committees of the Madras and Bombay Presidencies, the Central Provinces, the Punjab and the United Provinces, leading up to the introduction of the subject into the Indian National Congress that took place in Bombay in September of that same year. The whole question was then discussed at length and the resolution in favour of woman suffrage proposed by Mrs. Sarojini Naidu, passed by a three-fourths majority. The Muslim League, meeting at the same time also voted in favour of extending the franchise to women. Later National Congresses at Delhi and Bijapur reiterated their support of the inclusion of women on the same terms as men in the Reform Scheme. The Resolutions were as follows: "That women possessing the same qualifications as are laid down for men in any part of the (Reform) scheme shall not be disqualified on account of sex."

It will thus be seen that organised **Indian political opinion** stood solidly in favour of the extension to women of political opportunity for service. It was seen that Indian men as a body were not opposed to voting by women, nor prejudiced against extending women's sphere of influence. It has been the tradition of Indian history that a woman should be allowed to do whatever she proved herself capable of doing and political prohibitions had not been erected against women under the ancient regimes. Probably this traditional custom was the chief cause of the ready sympathy which has been accorded to the requests of Indian suffragists by their brothers throughout India.

The year 1919 was devoted to converting the Government forces to the justice and expediency of Indian Woman Suffrage, but this proved a more difficult matter. It was a disappointment first that though the Secretary of State had given a sympathetic reply to the All India Women's Deputation yet when the Scheme of Reforms, drawn up by him and Lord Chelmsford as the outcome of his visit to India, was published no mention of women was made, though the widening of the electorate was one of the reforms suggested. When the Southborough Franchise Committee was formed to investigate the suggestions regarding the franchise in this Scheme, the women suffragists took every means to bring to the notice of the Committee all the evidence which showed the need for, and the country's support of, including women in the new franchise.

Requisitions from the All India Women's Deputation, the many branches of the Women's Indian Association, the Women's Branches of the Home Rule Leagues, the Bharata Stree Mandal, and a special Memorandum signed by over 800 educated women of the Bombay Presidency were submitted to the Southborough Franchise Committee all expressing the desire of women for the vote. Two Indian ladies also appeared personally before the Committee to express the views of the Bengal and Punjab Provinces. Various Men's Associations also supported the claims of the women to the vote. Notwithstanding all this the Committee recommended the retention of the sex disqualification considering it "premature" to grant voting powers to women owing to what they considered the "social customs" of India. Sir Sankaran Nair, of the Government of India, dissented strongly from these views and urged that qualified women could and should be enfranchised in the Reform Scheme.

As the women who had previously claimed the suffrage were those who best knew whether or no the conditions were practicable for exercising the vote it was natural that this recommendation of the Franchise Committee evoked a storm of protest and denial. Large and repre-

sentative meetings of women were held in the important towns in the Madras and Bombay Presidencies, and a number of cablegrams were despatched to prominent persons in England all protesting vigorously against the postponement of women suffrage.

After the introduction of the **Government of India Bill** into Parliament in July 1919, a number of Indian deputations proceeded to London to give evidence before the Joint Select Committee of Members of both Houses of Parliament which had been appointed to place the Reforms on a workable basis. Mrs. Annie Besant and Mrs. Sarojini Naidu gave striking and weighty evidence on behalf of woman suffrage They were supported by the members of the India Men's Deputations without exception. Lord Southborough however gave the astounding evidence that Indian women did not themselves desire enfranchisement. Immediately from the Women's Indian Association the following cablegram was sent by the General Secretary, Mrs Jinarajadasa, to the Joint Committee." Forty-five branches of the Women's Indian Association controvert Southborough's evidence; they claim votes and protest against sex disqualification." Bombay women also cabled how they had read his evidence with pain and surprise and they proved how his belief was not founded on fact. The following cablegram sent on the same occasion by the Bombay Presidency Social Reform Association (President, Sir Narayan Chandavarkar) showed the strong feeling that existed: The Bombay Presidency Social Reform Association desires me as President to represent to you respectfully the Association's great disappointment at recommendation of Southborough Committee against franchise to women in India in Reform Scheme; cause of social reform much discouraged thereby, and among women in India and large class of social reformers also there is growing feeling of dissatisfaction Franchise to women will greatly help cause of sanitation and education on which India's future greatly depends. Educated women by reason of intelligence and sound practical sense more deserving of franchise than uneducated classes to whom Southborough Committee have recommended elective right."

It was felt that a representative must go directly from India to strengthen the women's position and accordingly a Woman's Committee, consisting of representatives of the different communities of the Bombay Presidency, selected Mrs. H. A. Tata and her daughter Miss M. A. Tata, B A., as their direct representatives to the Joint Committee. Mrs. Tata had been the Secretary of the Bombay Branch of the Women's Indian Association thus she was an ideal exponent on the Franchise movement in India. She had been the pioneer and hardest worker for woman suffrage in Bombay and by her work there and later in England sowed the seed and ploughed the ground that brought later the desired result in Bombay Presidency.

During the latter half of 1919 the **propaganda** for Indian woman suffrage was worked up chiefly in England as it was from Parliament that the grant of the claim was expected. Public meetings were held in many cities of Great Britain and the Women's Associations in England took a great interest in the cause of their Indian sisters and expressed their sympathetic support in every possible way. These meetings were addressed by Mrs. Besant, Mrs. Naidu and Mrs. and Miss Tata as well as by Indian ladies as resident in the West.

The result of all this agitation was but a partial success. The House of Commons decided that the question was one for Indians to answer for themselves and while retaining the sex disqualification in the Reform Bill they framed the Electoral Rules in such terms that if any Provincial Legislative Council should decide by a Resolution in favour of women's franchise, women should be put on the electoral register of that Province. Thus was the only provision regarding franchise matters which might be changed before a 10 years' time limit.

In 1920 back came the burden of the responsibility for the success of their cause to the Indian women in their own country. Again the Women's Indian Association took up the definite work of gaining the support of those who would have them late in their hands, and in the Madras and Bombay Presidencies the candidates for election to the new Reformed Councils were written to and asked to pledge themselves to support a Woman Suffrage Resolution in the New Councils, in return for which promise the members of the Association would give their influence to secure their election. Letters in the Press and appeals from Australian and British women suffragists to the new Councillors brought strongly before the latter their responsibility regarding women and the eagerness with which their Indian sisters were looking to them to turn their former Resolutions of support at Indian Conferences and Congresses into practice and law now that the power to do so had been accorded to them.

Travancore, a very progressive Indian State, was the first to grant the Legislative vote to women at the close of 1920, and it was promptly followed by the Indian State of Jhalawar. In the first session of the Legislative Councils in 1921 it is gratifying to record that a motion was tabled by Dewan Bahadur Krishnan Nair of Malabar that he would bring forward a Resolution in the **Madras** Legislative Council to remove the disqualification of sex existing in regard to the Legislative Council franchise. During the month that must legally intervene between the tabling of a Woman Suffrage motion and its introduction for Debate the Madras women under the leadership of the Women's Indian Association carried on all forms of public propaganda and canvasses the important members of the Council. The Debate took place on April 1st and after a short discussion in which it was evident that opposition came only from the Muhammadan members the debate itself became only an accumulation of appreciation of womanhood and an expression of faith in its future, when the division was taken, it resulted in the Resolution being carried by a majority of 34. Madras has thus the honour of being the first Province in British India to enfranchise its women, and it has done it ungrudgingly and unhesitatingly and in the broad spirit of the equality of the sexes, as it grants the vote to women on the same terms as it has been granted to men.

Mr. Trivedi brought forward a Woman Suffrage Resolution in the **Bombay** Legislative Council during the same session, but some irregularity in its wording caused it to be pronounced out of order. In June that subject was tabled again and championed by Rao Saheb Harilal Desaibhai Desai of Ahmedabad, Deputy President of the Council. As in Madras the intervening month was filled with suffrage activity by the women of the Presidency and was remarkable for a large joint meeting of Bombay city women at which 19 Women's Societies took part, and for a suffrage meeting of Marathi and Gujerati women in Poona when over 800 women showed the greatest enthusiasm for the movement.

The **Bombay** Council Debate on Woman Suffrage took three days and the subject was very fully discussed most by over 40 members The result was satisfactory to the suffragists, the voting being 52 in favour, 25 against and 12 neutral Thus Madras and Bombay Presidencies have given the lead to the other Provinces and it expected that before very long Bengal and the Punjab will also have enfranchised their qualified women as the latter are bringing the matter before the public and the members of their Councils. The women of Mysore State are also seeking the same rights as their sisters in their neighbouring Indian States, Travancore and Cochin, and after holding a number of meetings, went in Deputation, led by Mrs. Chandrasekera Iyer, to the Dewan, who promised to introduce the matter in the coming Legislative Council There is little doubt that it will be only a few years at most before all the provinces of India will have granted woman suffrage, and the right to vote will advance the interests of women immensely along the lines, of education, health, housing, morality and social customs.

The Indian Native States of Cochin is the only place in India where the sex disqualification has been completely removed from the statute book. It has allowed women the right to stand for election for the Legislative Council as well as the right to vote for it, and the Dewan has promised to consider sympathetically the Government nomination of women to the Council. In British India by the terms of the Reform Bill the Councils have no power to alter the disqualification of sex which remains against the rights to stand as candidates for election to the Councils. This can only be changed by the vote of the British Parliament, and the gaining of this right remains as a further objective of the women suffragists. The Imperial Legislative Assembly and the Council of State have been accorded the power to grant women the franchise for their assemblies also by resolution but only for those provinces which already have granted women the Legislative franchise.

The number of women who are likely to be enfranchised by the grant of the vote throughout India will not be more than a million under the present qualifications. Property and not literacy is the basis of the franchise, though the grant of the vote to every graduate of seven years' standing ensures that the best educated women of the country as well as those who have to shoulder the largest property responsibilities will be those who rightly will be the legislating influence on behalf of womanhood. As regards the custom of purdah prevailing in parts of India special provisions have been made in Municipal voting for purdah recording stations for purdah women in which a woman is returning officer and this has been found quite satisfactory and will be adopted also where desired in connection with Legislative Council elections.

Though the Women's Indian Association is the only defined Suffrage Society almost all other women's organisations have combined in special efforts for the gaining of municipal and legislative rights and the following ladies have identified themselves specially with the movement: Lady D Tata, Lady A. Bose, Lady T. Sadasivaier, the Begum of Cambay, Mrs. Sarojini Naidu, Mrs Jaiji Jehangir Petit, Mrs. Tata, Mrs. Wadia, Mrs. Jinarajadasa, Mrs. A. Besant, Mrs M. E Cousins, Mrs Ranade, Mrs Srirangamma, Mrs. Chandrasakehra Iyer, Miss Sorabji, Mrs. Khedkar, Dr. Mistry, Dr. Muthulakshmi Ammal, Mrs. Palmer, Mrs. Kumubini Basu, etc.

The rapid growth in the number of Women's Samajains and Women's Clubs in India ensures the organisation and education of the women who will be enfranchised, and through these Societies the women's vote will become a potent factor in influencing legislation

Indians Abroad.

The Indian is naturally averse from emigration beyond the seas. Nevertheless there are some hundreds of thousands of Indians resident in other lands as labourers, shopkeepers or professional men. Their total number relatively to the population of the Indian Empire is very small being something under two million. In itself, however, it is considerable; and it acquires an extrinsic importance from the social and political issues involved in the settlement of Indians, either as indentured labourers in Crown Colonies, or as free residents in self-governing countries.

The right to migrate.—From the Imperial standpoint the case of Indian migration to the self-governing Dominions is much the more important, and for a time the problems arising therefrom became acute. There were two centres of difficulty in 1914—South Africa and British Columbia; and in South Africa the old trouble has recrudesced since 1918 in a form that threatens once again to become acute, while during the past eighteen months the grievances of Indians in British East Africa have given rise to a situation of considerable gravity. In each country the situation involved particular local problems of extreme difficulty. But before passing to a discussion of them it is necessary to refer to the larger question of the right of migration within the Empire. The intense feeling aroused in India by the disabilities suffered by Indians in the countries named was primarily due to the belief that Indians were being denied the common rights of British citizenship. Without attempting to define the term "British citizenship," which is not so easily susceptible of definition as may be imagined, it must suffice to observe unrestricted migration within the empire does not appear to be the common right of His Majesty's subjects. The laws of the Dominion of Canada and the Commonwealth of Australia confer powers of exclusion of would-be immigrants hailing from any part of the Empire. These laws have been enforced against Englishmen on various grounds. The ground of exclusion is usually economic, and it is on that ground that the Dominion objection to unrestricted immigration from India operates. It is unfortunately inevitable that the problem assumes in the popular mind a racial complexion. But in actual experience it is the clash of economic interests and the possible political difficulties involved in the settlement of Indians in large numbers in the self-governing Dominions which the statesmen of the Empire have to take into account.

The first attempt to deal with the right of migration from a universal and Imperial standpoint was made by Lord Hardinge. In his address to the Imperial Legislative Council on September 8, 1914, he suggested that an endeavour should be made to lay down a principle of **reciprocal treatment** acceptable to all the Dominions, whereby emigration might be restricted in India itself by a system of passports, while the Dominions might give facilities to a moderate number of immigrants under certain conditions. This suggestion met with general approval in and out of India, and eventually bore fruit at the deliberations of the Imperial Conference and War Cabinet in 1917 and 1918. In the former year a Memorandum was presented on behalf of the India Office setting forth in detail Lord Hardinge's system of reciprocity, and in the latter year the following resolution was agreed to unanimously by India and all the self-governing Dominions:—

"(1) It is an inherent function of the Governments of the several communities of the British Commonwealth, including India, that each should enjoy complete control of the composition of its own population by means of restriction on immigration from any of the other communities.

"(2) British citizens domiciled in any British country, including India, should be admitted into any other British country for visits, for the purpose of pleasure or commerce, including temporary residence for the purpose of education. The conditions of such visits should be regulated on the principle of reciprocity as follows.—(*a*) The right of the Government of India is recognised to enact laws which shall have the effect of subjecting British citizens domiciled in any other British country to the same conditions in visiting India as those imposed on Indians desiring to visit such country; (*b*) such right of visit or temporary residence shall in each individual case be embodied in a passport or written permit issued by the country of domicile and subject to *vise* there by an officer appointed by and acting on behalf of the country to be visited if such country so desires; (*c*) such right shall not extend to a visit or temporary residence for labour purposes or to permanent settlement.

"(3) Indians already permanently domiciled in the other British countries should be allowed to bring in their wives and minor children on condition: (*a*) That not more than one wife and her children shall be admitted for each such Indian; and (*b*) that each individual so admitted shall be certified by the Government of India as being the lawful wife or child of such Indian."

Between 1918 and 1921 Canada and Australia took the necessary legislative steps to carry into effect the terms of this resolution. In New Zealand, Newfoundland, and South Africa, no legislation was necessary inasmuch as in the first two mentioned Dominions Indians resident therein are subject to no disabilities, while in the case of South Africa the resolution was merely a re-statement of the policy embodied in the Immigrants' Regulation (Restriction) Act of 1913, and the Indians Relief Act No. 22 of 1914.

The 1921 IMPERIAL CONFERENCE saw a big stride, taken by the Dominions in the direction of the grant of complete political equality to British Indian subjects within the Empire. The Indian delegates reiterated the willingness of India to stand by the Reciprocity Agreement arrived at in 1918, but at the same time they urged the Conference to grant

to those Indians who were legally domiciled within the Dominions such political freedom as was implied in the equal partnership of India in the British Commonwealth of Nations. In response to these representations the Imperial Conference passed the following resolution:—"This Conference has reaffirmed that each Community of the British Commonwealth should enjoy complete control over the composition of its own population by restricting immigration from any other communities, but recognises that there is incongruity between the position of India, as an equal member of the Empire, and the existence of disabilities upon British Indians lawfully domiciled in some other parts of the Empire, and this Conference, therefore, is of opinion that in the interests of the solidarity of the Commonwealth it is desirable that the rights of such Indians to citizenship should be recognised. The representatives of South Africa regret their inability to accept this resolution in view of the exceptional circumstances of the greater part of the Union. The representatives of India, while appreciating the acceptance of this resolution, nevertheless feel bound to record their profound concern at the position of Indians in South Africa and hope that by negotiations between India and South Africa a way can be found as soon as may be to reach a more satisfactory position."

The passage of this resolution was received with great satisfaction in India but much regret was felt at the abstention of South Africa but, as we shall presently see, the situation in South Africa is peculiar and the state of public feeling there against Indians is of an acuteness which rendered it not surprising that General Smuts was unable to join the other Dominion Premiers in signing the resolution.

In South Africa the trouble gathered round the disabilities of Indians already settled there. The question of immigration restrictions, though important, held a less prominent place in the agitation. The most acute point of the controversy was the annual £3 head tax in Natal. While the controversy was at its height, an Act was passsd in the Union Parliament, restricting entry into South Africa to the wife or child of a lawful immigrant or resident who was the wife or child of a monogamous marriage. In a case brought before the courts it was decided that the only wife of a marriage solemnised according to the rites of a religion permitting polygamous marriages could not be admitted. The leaders of the agitation in South Africa adopted passive resistance tactics, which brought large bodies of Indian workmen in Natal into conflict with the police. The situation became acute, and a strong demand arose in India for the appointment of a Government Commission to enquire into the whole question. The Union Government appointed a Commission, and invited the Government of India to send a representative. Sir Benjamin Robertson, Chief Commissioner of the Central Provinces, was selected. The Commission reported on the whole favourably to the Indians.

The Indians' Relief Act, 1914, gives effect to those five of the 14 recommendations made by the Commission which necessitated legislation. First by the deletion of certain words from the Immigrants' Regulation Act, 1913, an Indian, married in accordance with the rites of a religion by the tenets whereof polygamy is recognised, is enabled to introduce into the Union one wife as well as her minor children by him, provided the Indian has in the Union no other wife. Another recommendation of the commission to which effect is given is as follows: An Indian man and an Indian woman may, on a joint application to a magistrate or marriage officer, and on complying with certain prescribed formalities, obtain registration of such a union between them as is *de facto* a monogamous union, and such registration will constitute a valid and binding marriage between them with all the incidents thereof, and will be recognised in the Union as such, notwithstanding that, by the tenets of the religion which they profess, polygamous marriages are recognised.

The third recommendation of the Commission to which effect is given is a provision for the appointment of Indian priests as marriage officers under the marriage laws of the several provinces of the Union. So far as Cape Colony is concerned this had been possible, as regards the Mohammedan religion, under Act No. 1 of 1860, while Law No. 19 of 1891 of Natal contained a similar provision. Under the new Act any Indian priest may be appointed a marriage officer for the purpose of the marriage laws of any province of the Union, and a marriage solemnised by him will, if solemnised in accordance with the rites and formularies of his religion and without any prescribed statutory words signifying the binding nature of the ceremony, be recognised as valid.

Another provision provides for the repeal of that section of the Natal Indian Immigration Laws which imposed an annual licence of £3 on Indians who, introduced as indentured labourers, failed to reindenture at the termination of their contracts.

The Smuts-Gandhi Agreement.—With the measure of relief afforded by the Act of 1914 Mr. M. K. Gandhi, who had gone to South Africa in connection with the passive resistance movement, expressed himself as satisfied; and certain correspondence passed between him and General Smuts, who was then the Minister of the Interior, in which an agreement was arrived at with regard to Indian traders in the Transvaal. The following extracts from the correspondence summarise the agreement and are of importance because of the part they played in 1919 when the controversy was revived:—

(*a*) From a letter of the Secretary for the Interior to Mr. Gandhi, dated June 30, 1914: "With regard to the administration of existing laws, the Minister desires me to say that it always has been, and will continue to be, the desire of the Government to see that they are administered in a just manner with due regard to vested rights."

(*b*) From the same letter: "In conclusion General Smuts desires me to say that it is, of course, understood and he wishes no doubts on the subject to remain, that the placing of the Indians' Relief Bill on the Statute Book of the Union, coupled with the fulfilment of the assurance he is giving in this letter in regard to the other matters referred to herein touched upon at the recent interviews, will constitute a complete and final settlement of the controversy

which has unfortunately existed for so long, and will be unreservedly accepted as such by the Indian community."

(*c*) From a letter of Mr. Gandhi to the Secretary for the Interior, dated July 7, 1914: "By vested rights I understand the right of an Indian and his successors to live and trade in the township in which he was living and trading, no matter how often he shifts his residence or business from place to place in the same township."

(*d*) From a letter of Mr. Gandhi to the Secretary of the Interior, dated June 30, 1914: "The passing of the Indians' Relief Bill and this correspondence finally closes the passive resistance struggle. .... As the Minister is aware, some of my countrymen have wished me to go further. They are dissatisfied that the trade licenses laws of the different Provinces, the Transvaal Gold Law, the Transvaal Townships Act, the Transvaal Law 3 of 1885, have not been altered so as to give them full rights of residence, trade and ownership of land. Some of them are dissatisfied that full interprovincial migration is not permitted, and some are dissatisfied that on the marriage question the Relief Bill goes no further than it does. They have asked me that all the above matters might be included in the passive resistance struggle. I have been unable to comply with their wishes. Whilst therefore they have not been included in the programme of passive resistance, it will not be denied that some day or other these matters will require further and sympathetic consideration by the Government. Complete satisfaction cannot be expected until full civic rights have been conceded to the resident Indian population."

In 1919.—The controversy again broke out, and this time it was confined to the Transvaal The points at issue were as follows:—

(1) The interpretation of Mr. Gandhi's definition of "vested rights" was disputed. On the one hand it was held that "vested rights" meant "the rights existing at the time of the agreement", and it was accordingly alleged that the Indians who opened shops and carried on businesses in townships in which they were not licensed to trade in 1914 had broken the terms of Smuts-Gandhi agreement. It was further contended that the word "successor" in the definition meant "legal successor or heir," and that those Indians who had sold their businesses to other Indians had in that respect also infringed the agreement. On behalf of the Indians, on the other hand, it was argued that "vested rights" meant the inherent rights of the whole Asiatic community—the right to trade—whether the rights were being exercised by any particular man at the time of the agreement or not, and included even the inherent rights of the unborn. As regards "successor", that, the Indian community maintained, meant "any successor in title, no matter how he acquired his right to succession, whether he purchases it or otherwise."

(2) The Transvaal Gold Law of 1908 (No 35) as interpreted in the judgment of Krugersdorp Municipality *versus* Beckett provides in Section 130 that no right under that law may be acquired by a coloured person, and that no holder of a right may permit any coloured person other than his *bona fide* servant to reside on or occupy ground held under such right. Under Section 131 no coloured person is permitted to reside on proclaimed land in the Mining Districts of Johannesburg, Boksburg, and Krugersdorp except in locations, etc., appointed by the Mining Commissioner. To obtain relief from the provisions of this Act as thus interpreted the Transvaal British Indian Association petitioned Parliament in February, 1919.

(3) Although it was decided in the case of Motan *versus* the Transvaal Government that the Commissioner of Inland Revenue cannot refuse to issue general dealers licenses to coloured persons, yet as far as licenses for grocery shops, eating-houses, etc., are concerned, these are controlled by the municipalities, who have the right to withhold licenses if in the opinion of the Councils the applicant is not a desirable person to hold such license. Under this power Transvaal municipalities, especially that of Krugersdorp, consistently refused licenses to Indians on the sole ground that they were Indians. In several cases the Magistrate of Krugersdorp overruled the decision of the Council, and the municipalities have denied that they refused licenses to Indians as such. From this alleged systematic refusal of licenses by the municipalities the British Indian Association also petitioned Parliament for relief.

(4) By the Transvaal Law 3 of 1885 it was provided that Indians and Asiatics generally "may not be the owners of fixed property (*i.e.*, land) in the Republic." This law is still in force. But by Act 31 of 1909 two or more persons may form a private limited liability company, and there was no provision of the law preventing such a company from owning land. Profiting by this state of the law, it became the practice of Indians to form such companies and by this means obtain that ownership of land which was denied them by the law of 1885. This was alleged to be a contravention of the spirit of the Smuts-Gandhi agreement, and aroused considerable feeling in the Transvaal.

In March 1919, in consequence of the petition mentioned above and of the acute bitterness that had arisen as a result of the controversy, the Union Parliament appointed a Select Committee to report on the matter. The Committee reported on April 30 and recommended (*a*) That the vested rights of Indians who were carrying on business in proclaimed Mining Areas in June 1914 should be respected. (*b*) That the vested rights of Indians who since that date obtained trading licenses and are carrying on business on such areas should also be respected. (*c*) That Indians should have the right to transfer their existing businesses to other Indians legally residing in the Transvaal. (*d*) That steps should immediately be taken to render it impossible for any Asiatic in the future to obtain a license for a new business. (*e*) That Transvaal law 3 of 1885 should be amended so as to extend the land-owning disabilities therein to any companies of which the controlling interest is possessed by Asiatics. Thus, "vested rights" were held to be actual existing, and not potential, rights, while "successors" were defined as "successors in title."

The Asiatics (Land and Trading) Amendment Act, 1919, gives effect to the recommendations of the Committee. It had a

stormy passage through the House and entirely satisfied neither the Indians nor those whose feelings are anti-Indian. The Indians objected to the recommendations (*c*) and (*d*) above, and the anti-Indians fought hard against recommendation (*c*). To placate the anti-Indians and to obtain the passage of the Bill through the House, the Government had to promise to appoint a Parliamentary Commission to go into "the whole Asiatic question in the Transvaal." The Bill also aroused considerable feeling in India, and Mr. Montagu, the Secretary of State for India, suggested to the Union Government that India should be represented on the Commission by one official and one non-official. After negotiations between the Union Government and the Government of India, it was announced that India was to be represented "not on but before" the Commission by Sir William Robertson; and in February 1920 the personnel of the Commission was announced as consisting of the following four members:—Sir Johannes Lange, Puisne Judge of the Supreme Court, Griqualand West, chairman; Lieutenant-Colonel Scott Wylie, of Durban, Natal; Mr. William Duncan Baxter, M. L. A., of Cape Town; and Mr. Henry John Hofmeyr, of Johanesburg, Transvaal. At the same time the terms of reference were announced, as follows—To enquire and report on the provisions of law affecting:—(a) The acquisition of land and rights affecting land in the Union by Asiatics and persons of Asiatic descent for trading or other purposes. (b) The trading or carrying on of business by such persons generally or in specified localities. (c) To consider whether it is in the public interest to alter the law in any respect, and (d) To make recommendations with regard to any difficulties and grievances which may have arisen in connection with (a) and (b).

During the latter part of 1919 both sides were busy preparing their cases for presentation before the Commission. On the one hand a South African League (it was orginally called the Anti-Asiatic League) was formed in the Transvaal to combat "the Asiatic menace", to urge "the stringent application" of all laws imposing disabilities on Asiatics, and to collect evidence for submission to the Commission. A large and influential congress at which were present delegates representing trade unions, Chambers of Commerce, and political, commercial and industrial interests in general, was held in Pretoria on September 4 and 5 to inaugurate the league. Violent anti-Indian speeches were delivered, and extreme resolutions were passed, including one which urged the Government to repatriate all Indians in the Transvaal, after paying them monetary compensation. On the other hand, in August an Indian National Congress was held at Johannesburg, which was attended by Indian delegates from all parts of the Union. Twenty-three resolutions were passed demanding the abolition of all disabilities, the granting of full civic rights, including political franchise and the right of interprovincial migration, and the provision of more liberal educational facilities.

Voluntary Repatriation.—The Commission began taking evidence at Capetown about the middle of March 1920. The greater part of April was spent in the Transvaal, where not only Pretoria and Johannesburg were visited but also many of the smaller towns and villages, in which the Asiatic "menace" was supposed to be most pronounced. The concluding sittings took place in Natal in the early part of May. Sir Benjamin Robertson attended all the sittings of the Commission on behalf of the Government of India; and in all three Provinces the Indian case was ably presented by eminent counsel whose services the Indian communities had retained. The case for the anti-Indians was as ably, if not as temperately, urged by the South Africans' League in the Transvaal and by the farmers' organisations in Natal. The Commission also took pains to examine a large number of independent witnesses.

Almost immediately after the concluding sittings in Natal the Commission surprised every body by bringing in an *ad interim* report recommending the Union Government to take immediate steps to encourage as many Indians as possible to consent to be repatriated; and to this end the Commission urged the Government:—

(*a*) to appoint an official not connected with the Protector's Department to organise the return of such Indians as are prepared to go, (*b*) to provide frequent shipping facilities at short intervals, (*c*) to relax restrictions on the export of gold in so far as necessary in order to allow returning Indians to take their legitimate savings and jewellery with them to India, (*d*) to make provision where necessary for enabling Indians and their families to reach their homes after arrival in India.

In making this report the Commission exceeded the strict letter of their terms of reference; but inasmuch as the recommendation involved no fresh legislation to carry it into effect and had both the support of Mr. C. F. Andrews, who gave evidence before the Commission in Capetown, and the approval of Sir Benjamin Robertson, the Union Government lost no time in intimating their intention of accepting the suggestion. The Government possessed ample powers for this purpose under the Relief Act of 1914, in accordance with the provisions of which 18,000 Indians had already been voluntarily repatriated; and they now proceeded to increase the inducements and facilities for further repatriation, and appointed as Repatriation Officer to undertake the work of organisation Mr. Wynne Cole, who, as Licensing Officer in Natal had had considerable experience among the Indian community. At first the still-existing war-time regulation forbidding anyone to take, either in the form of jewelry or money, more than £ 5 worth of gold out of the country caused the repatriation scheme to hang fire; but this matter was soon put right by allowing Indians who were being repatriated to take with them all their ornaments and jewelry and £ 25 in gold, any money they might possess over £ 25 being given back to them in the form of currency notes or drafts. Free passages to India were provided and those who were destitute were given slight financial aid. The first batch of Indians to be voluntarily repatriated under this new scheme numbered 95. They sailed from Durban on September 2 and arrived in Bombay on September 22. There was some

slight opposition to the scheme both in India and in the Union. In India it was regarded with suspicion, first because it was made a condition of the grant of a free passage that the repatriated Indians should sign a declaration relinquishing their South African domicile and their right to return to South Africa; and, secondly, because it was imagined that voluntary repatriation might be the harbinger of compulsory repatriation. In South Africa, on the other hand, it was argued that the scheme deprived the sugar and tea plantations of desirable labourers and left behind the prosperous traders and the skilled workers who constituted the Asiatic "menace."

While awaiting the final report of the Commission, the South Africans' League redoubled the intensity of their propaganda campaign. They circulated a monster petition throughout the Transvaal, praying for relief from the Asiatic "menace," and obtained no fewer than 80,443 signatures, including those of 28 municipalities, six Chambers of Commerce, five Trade Unions, and Eleven Farmers' Associations. This petition was presented to the Union House of Assembly by Sir Abe Bailey shortly after the General Election. Later on in the year, the South Africans' League, having spread throughout the Transvaal, extended its operations to Natal, and numerous branches were established in that Province.

The Commission's Final Report.—Although the Committee finished its sittings early in 1920, its final report was not published until March 1921. The report was of very great length, and a large number of recommendations was made of which the following is a summary:—

(1) Law 3 of 1885 (Transvaal), the Gold Law of the Transvaal (Act No. 35 of 1908) and Act No. 37 of 1919 should not be repealed (paragraph 198).

(2) There should be no compulsory repatriation of Asiatics (paragraph 118); but

(3) Voluntary repatriation should be encouraged as outlined in our Interim Report submitted in May 1920 (paragraph 119).

(4) There should be no compulsory segregation of Asiatics; but

(5) A system of voluntary separation should be introduced under which municipalities should have the right, subject to certain conditions—

(*a*) to lay out residential areas for Asiatics;

(*b*) to set aside certain streets or portions of the town for Asiatic traders, to which existing license-holders should gradually be attracted.

(6) These areas should be selected and allocated by a board of independent persons, in consultation with the Municipal Council and Asiatic community (paragraphs 120 to 131 and 200-201).

(7) In Natal the right of Asiatics to acquire and own land for farming or agricultural purposes, outside townships, should be confined to the coast belt, say, 20 to 30 miles inland (paragraph 199).

(8) Law 3 of 1885 (Transvaal) should remain applicable to the Vryeid, Utrecht and Paulpietersburg districts of Natal (paragraph 178).

(9) The existing laws relating to Asiatics in Zululand and the Transkeian Territories should remain unaltered (paragraphs 179 and 189).

(10) A uniform "Licence Law" applicable to all the provinces of the Union should, if possible, be enacted. If that is impracticable, the laws relating to the issue of Trade License in the Cape Province, the Transvaal and Natal should be assimilated in a comprehensive consolidating Act of Parliament providing, *inter-alia*:—

(*a*) That the granting of all licences to trade (not being liquor licences) shall be entrusted to municipal bodies within the area of their jurisdiction, outside those areas, to Divisional Councils in the Cape Province, and in the other Provinces to special Licensing Officers appointed by the administrator.

(*b*) The grounds upon which an application for the grant of a new license may be refused.

(*c*) That the reasons for the refusal to grant any license shall be recorded, together with any evidence tendered for or against the application.

(*d*) That in the case of the refusal of a license on the ground that the applicant is not a fit and proper person to hold the same or to carry on the proposed business, there shall be final appeal to a Special Appeal Board, appointed by the Administrator.

(*e*) That municipal bodies shall have the right to prohibit the license-holder, or any other person, from residing in any shop, store or other place of business (paragraphs 204 to 211).

(11) There should be no relaxation in the enforcement of the Immigration Laws, and more active steps should be taken to deal with prohibited immigrants who have evaded the provisions of those laws (paragraphs 219 to 223).

(12) The administration of the Asiatic policy of the Government should be placed in the hands of one official with duties as set out in paragraph 222.

Appended to the report was Mr Duncan Baxter's reservation which was as follows:—

I dissent from the recommendation contained in paragraph 199 of this report, *viz.*, that the right of Asiatics to acquire land in Natal for farming and agricultural purposes should be restricted to the Coast Belt. It seems to me a retrogade proposal, inconsistent with other recommendations in the report, which are founded on the idea of voluntary separation and not compulsory. It is also a restriction of existing rights of ownership, and, in the case of ex-indentured Indians and their descendants, a breach of the conditions of recruitment, which I think should be scrupulous adhered to in the interests of good feeling and the sense of fair-play, so necessary in our relations with the Indians in South Africa and the Government of India.

With the policy of attracting Indians to the Coast Belt by good treatment and security of tenure I am in agreement. I go further and

believe that it would be an act of wisdom on the part of the Government to acquire land in the part of Natal and lease it on favourable terms to Indians. The climate and agriculture of the Coast Belt are admittedly those best suited to Indian enterprise, and it such a policy were effectively carried out, it would not only be to the advantage of the Indian cultivators and the consuming public, but it would tend also to relieve the fear of an Indian "invasion" held by European farmers in the uplands of Natal.

The reception of the report—The report of the Commission,like that of the 1919 Preliminary Committee, had a very mixed reception. The anti-Indians were not satisfied, because they were told that the so-called "Asiatic Menace" was greatly exaggerated, and because the Committee definitely decided against both compulsory repatriation and compulsory segregation. The Indians, on the other hand, were dissatisfied first because they had hoped for some alleviation of their disabilities, while not one of their disabilities was removed, and because the Commission recommended the imposition of at least one additional disability—namely, the restriction of the right of Indians to own land for agricultural purposes in Natal to the Coastal Belt. And not only were the Extremists on both sides dissatisfied, but even the moderate-minded would not give their support to the report because it was felt that the Commission had failed to fulfil the real purpose for which it had been appointed, namely, to grapple with the whole Indian question throughout the Union and to settle it definitely by the enunciation of definite principles and a definite policy. So far from enunciating a definite policy, the Commission has dealt with the problem in a timorous and piecemeal fashion, so that the position has not only not been bettered by the labours of the Commission but is now in a far more critical and unsettled condition than it was before the Commission sat.

The Commission's report was laid before Parliament during the March session but for some time the Government did not declare their intentions with regard to it Finally, however, as the result of motions moved by Natal members with a view to forcing the hands of the Government, the Minister of the Interior announced that the Government had decided to take time to consider what their action should be in regard to the report and that no legislation would be introduced during their session. As a matter of fact, no legislation based upon the report has yet been introduced up to the moment when this *Year Book* went to press. This was due chiefly to the supervention of the Imperial Conference at which the status of Indians throughout the Empire was discussed (*vide* p. 538).

Natal Anti-Indian Legislation vetoed—During the year 1921 the Indian question in South Africa was taken out of the category of a local question and elevated to that of an Imperial problem. Striking proof of this fact was given by the vetoing by the Governor-General in Council, Prince Arthur of Connaught, of two Ordinances of the Natal Provincial Council, both of which were designed to add to the disabilities of Indians in the Province. One of the Ordinances aimed at depriving the Indian of his right to elect candidates to Township Boards, and the other affected his right to obtain municipal trading licenses. The first ordinance was the result of the success of an Indian ticket at a township election The ticket consisted of Europeans who sought the suffrage of the Indian voters, but after their victory the Indians declared their intention at the next election of putting up a ticket consisting entirely of their own countrymen The second ordinance was a protest against the recommendations of the Asiatic Commission with regard to the unification of the laws of municipal licenses. Both ordinances were vetoed by the Governor-General in Council on the express ground that the Government was pledged to protect the vested rights of Indians throughout the Union

In British Columbia, the trouble over Indian immigration came to a head in the early part of 1914, when a ship-load of Indians was despatched direct from the Far East to Vancouver. It was held up in the harbour there for several weeks. The passengers were not allowed to land. An appeal to the Canadian courts resulted in the rejection of their claim, and eventually they were shipped back to India. (For further details, see the *Times of India Year Book* for 1920, p. 496).

There are some 4,000 Indians already settled in British Columbia, chiefly Sikhs. They work as agricultural labourers, in factories and lumber yards, and also on the railways. The desire amongst them to bring their wives and families out from India points to the fact that they are fairly prosperous and find the conditions of life in the Colony agreeable. The attitude of the Colonial authorities towards them is governed by the general objection to Asiatic immigration. It is felt that the unrestricted entry of Asiatics would threaten the existence of British Columbia as a "White man's country." The immigration of Japanese and Chinese is regulated by special treaties with their Governments. The number of Japanese is limited to a few hundreds annually. Chinese immigrants pay a head tax of 500 dollars on entry.

In British East Africa.—The beginnings of the present trouble in British East Africa must be dated back to 1902, for it was about then that it was first realised that the Nairobi Uplands were fit for European settlement, and it was then that a Land Ordinance became law wherein the policy was embodied of allotting lands in the Uplands to Europeans and lands in the Lowlands around Mombassa to Indians. European allotments were unlimited, while those to Indians were restricted to 100 acres per person. But it was not till about the middle of 1918 that the Indians were able to make their voice heard in defence of their rights. Previous to the war the encroachments had been so gradual that the Indians hardly realised what was happening, and during the war British East Africa was under Martial Law from August 5, 1914, to February 25th, 1919, which had the effect of rendering the Indians compulsorily dumb except for the last few months of the military regime when the strictness of the administration of Martial Law was

somewhat relaxed. These conditions, which were necessarily imposed by the fact of war, were taken advantage of by the East African Government; and the Legislative Council, upon which the Indians were unrepresented, passed a Land Ordinance in 1915 giving the Governor a veto on the sale of all Crown Lands by Europeans to Indians. Nor was this all In 1915 Professor W. J Simpsom on July 2nd, 1912, made a report to the Colonial Office, which had sent him to East Africa for the purpose at the request of the Administration, upon the general conditions of the Colony. His report recommended *inter alia*, a scheme of **racial segregation** whereby Indians were to be excluded from inhabiting certain portions of the town of Nairobi and certain portions of other towns under a Town Planning Scheme This report was kept secret until 1916, and in 1919 was put in operation by the Segregation of Races Rules and the Town Planning Scheme Ordinance. By these laws definite residential and commercial areas in towns are demarcated with strict rules segregating the races. Immediately after the war the Administration allotted land to ex-British soldiers, but none was given to ex-Indian soldiers During July, 1920, a change took place in the constitution of the Government What had hitherto been known as the British East African Protectorate was divided into two portions, Mombassa, the Lowlands around Mombassa, and the continental territories of the Sultan of Zanzibar were named **Kenia Protectorate**, while the rest of the country, which included Nairobi and the Uplands, was termed **Kenia Colony** with the status of a Crown Colony. The object of this was to confine the Indians as far as possible to the Mombassa districts and reserve the delectable Uplands around Nairobi for Europeans.

The Indians did not remain inactive under these increasing disabilities. The British East Africa Indian Association was formed, and made strong representations to the Home Government. A deputation was also sent to India, to enlist the sympathy and help of the Government and people. In the latter part of 1919 it became known that Lord Milner, the Colonial Secretary, was taking steps to enquire and act in the matter; and in February of the following year he met the Governor of British East Africa, General Northey, in London and conferred with him. At this conference the Government of India was represented The result was the passing of the Town Planning Ordinance and the Segregation of Races Rules mentioned above; but the position of the Indians was alleviated to this extent that with the renaming of the colony it was enacted that the Legislative Council of Kenia Colony should consist of 11 elected European members and three members to be nominated by the Governor, two to represent the Indians and one to represent the Arabs. Meantime the Government of India had clearly defined its attitude in regard to the treatment of Indians in East Africa. Speaking at the opening of the Imperial Legislative Council on January 30th, 1920, the Viceroy, Lord Chelmsford, declared that the Government took its stand upon the constitutional principle that in a Crown Colony or Protectorate British Indian subjects ought not to be given a lower status than any other British subjects. Later in the year a deputation of Indians from Kenia was received most sympathetically by the Viceroy, and in his address to the Imperial Legislative Council on September 1920 he announced that the Government had strongly pressed, and was continuing strongly to press its views of the justice of the Indian case upon the Home Government; and that if the Indian Government's efforts should prove unavailing with the Home Government, serious consideration would be given as to the steps to be taken by the Government of India to protect the rights of its subjects resident in Kenia Colony and Protectorate.

The result of the Government of India's representations and of the continued agitation on the part of Indians in East Africa, and also to some extent of the numerous resolutions of protest passed in India by various public meetings, Merchants' Associations and other bodies, was that **Lord Milner** addressed on May 21st, 1920, a **despatch** to the Governor of Kenia Colony in which all the grievances of the Indians were exhaustively discussed. The despatch met the Indian view to the extent of prescribing that the two Indian members of the Legislative Council should cease to be nominated by the Governor and should be elected by the Indians themselves. But the obnoxious segregation measures were left untouched! This despatch was not acceptable to the Government of India, but it made no announcement upon the matter pending the receipt of the report upon the whole question which the Government had instructed Sir Benjamin Robertson to make after a sufficient stay in East Africa on his way back from South Africa. During November it was announced that the report had been received and that, together with a despatch upon it by the Government of India, it had been forwarded to the Secretary of State; and that no public statement would be made until the reply of the Secretary of State had been received. Meanwhile in Kenia the Indians had grown more desperate. Lord Milner's despatch was regarded as highly unsatisfactory, and during November and December the Indians held many public meetings of protest. A large number of Indians resigned their public offices, and resolutions were sent to the Home Government threatening a campaign of boycott and non-co-operation unless adequate parliamentary and municipal franchise was granted and on the segregation laws repealed.

Other Grievances.—So far mention has been made only of the segregation and franchise grievances, for these are by far the most important But there were others: for example the denial to Indians of the right of trial by jury, the exclusion of members of the Indian legal and medical professions from the right to practise, the inadequacy of educational facilities, and the threatened passing of the Removal of Undesirables Ordinance. This Ordinance would not only have given power to the East African Government to deport any Indians they desired to get rid of, but would have been the thin edge of the wedge of the restriction of Indian immigration. It was, however, never passed, owing to the strength of the opposition to it; and Lord Milner's last despatch definitely safeguards to the right of immigration. The

despatch also gives the right of trial by jury to Indians; contains some rather ambiguous references to the rights of Indian medical and legal practitions which are capable of favourable interpretation; and promises increased educational facilities.

IN 1921 THE SITUATION IN KENIA increased in gravity. Mr. Churchill took the place of Lord Milner at the Colonial Office, and at once made it clear that his policy with regard to the Indian question in Kenia was to differ considerably from that of his predecessor Several utterances of Mr. Churchill's seemed to indicate that he was in substantial agreement with the view of the Government of India—namely, that in a Crown Colony there was no justification for allotting to Indians a lower political status than that enjoyed by any other British subjects in that Colony. Mr. Churchill, however, added a proviso that such a state of affairs should be brought about in Kenia by successive stages which would occupy some time for their passage. Despite this proviso, the Europeans in Kenia were thrown into a state of great excitement by Mr Churchill's utterances, and widespread opposition to the Indian demands was hastily organised. Speeches were delivered from time to time by prominent Europeans in the Colony of an extremely heated and intemperate nature; and at numerous public meetings held throughout the Colony resolutions were passed declaring that the Europeans intended to oppose by every means in their power the Indian claims. This agitation amongst the Europeans stimulated the Indian community to similar measures, and public meetings of Indians were held at which resolutions were passed reiterating the determination of the Indians to win complete political equality and the right of unrestricted landownership, and as a threat the Indians declared their intention, if their claims were not granted, to refuse to pay taxes and to commence a campaign of passive resistance. Both sides sent deputations to England to urge their views before the Colonial Office, and the Government of India continued to press its championship of the Indian case upon the Secretary of State and Mr. Churchill. During the latter half of the year the situation in Kenia had become so grave and the state of feeling had risen to such a pitch that Sir E. Northey, the Governor, was called to London to discuss the situation with the Colonial Secretary. At about the same time the Europeans in Kenia despatched a deputation to tour throughout Rhodesia and the Union of South Africa and to interview General Smuts with a view to invoking his sympathy. General Smuts, being forbidden by his position to receive the deputation officially, consented, however, to receive it unofficially, and assured the deputation of his unofficial sympathy. He added that he had urged upon the Imperial Conference the view that as regards the Indian question Africa should be treated as a whole. The deputation, after the interview with General Smuts, toured the Union, and everywhere received expressions of sympathy. Meantime the natives in Kenia had not remained silent, and at several public meetings had expressed the view that they regarded the Indians as their best friends after the English missionaries, and that the influence of the Indian upon the native was all to the good. It was alleged by the Europeans, however, that these native resolutions had been engineered by the Indians as a reply to the allegations made by the Europeans that the influence of the Indians upon the natives was evil and corrupting. In October Sir. E. Northey returned from England but, contrary to expectation, he made no immediate pronouncement of policy. In a speech delivered shortly after his return he declared that his intention was to endeavour to bring about a better state of feeling between Indians and Europeans, as, in the present whirlpool of emotions, it was impossible that any reasonable compromise could be effected. In addition to making this public speech, it is known that Sir E Northey has had several interviews, with Indian and European leaders with a view to bringing about that more promising atmosphere to which he referred in his speech, and Indians accepted seats in the Executive and Legislative Councils.

TANGANYIKA.—In August 1919, the Secretary of State for India, in a despatch addressed to the Indian Government, conveyed an offer made by Lord Milner in April of the same year, to discuss the possibility of encouraging the settlement of Indians, preferably agriculturists and ex-service men, in some parts of Tanganyika Territory In the course of the despatch the India Office asked the Government of India to discover the general view of the country upon the following points: (1) Whether from the point of view of India an organised scheme of settlement in Tanganyika was regarded as desirable and practicable. (2) How far a suitable type of agriculturists, ex-service men or others would be attracted by the prospects of free settlement in the territory. (3) Whether the Government of India would be prepared to encourage such colonisation and how far it would be willing to go in giving financial assistance. In order to be able to answer these questions the Government of India arranged that on his way from South Africa Sir Benjamin Robertson should go to Tanganyika Territory for the purpose of eliciting the views of the Tanganyika Administration in the matter and in order to survey the local conditions in the territory. The Government of India has now published Sir Benjamin Robertson's Report upon his visit to Tanganyika and also the Government Despatch to the Secretary of State conveying the Government's answers to the three questions put by the India Office.

In the course of his report Sir Benjamin Robertson came to the following conclusions:

(1) There is no vacant land suitable for an Indian reserve. The land which is now vacant is generally vacant because it has some defect. (2) Small settlers with only a moderate amount of capital, whether white or coloured, face grave risk of disaster in a country where capital for the employment of native labour is essential. (3) It would be inconsistent with article 22 of the Covenant of the League of Nations to exclude the Native peoples from part of the Tanganyika Territory in order to form an Indian reserve. In regard to (1) Sir Benjamin Robertson found that the land which was suggested to be set aside for Indians was extremely difficult to work agriculturally, that the climate was un-

healthy and malarious and that in a great part of the territory it was impossible for cattle, horses or any domestic animals to live. With regard to (2) Sir Benjamin Robertson said that unless the Indian Government were prepared to give Indian settlers close supervision and liberal financial support, it would be impossible for Indians to make a success of small holdings. With regard to (3) Sir Benjamin Robertson pointed out that it would only be possible to form an Indian reserve by excluding the natives, which would be a clear breach of the terms under which the mandate for Tanganyika was granted by the League of Nations. Sir Benjamin Robertson concludes: "The proposal to settle small cultivators in a special Indian reserve is, in my opinion, unsound both politically and economically, and I recommend that it should now be dropped."

In its despatch the GOVERNMENT OF INDIA accepted the findings of Sir Benjamin Robertson's report, and informed the Secretary of State that it was of the opinion that the proposed colonisation by small cultivators should be dropped. The Government was led to that view not only by the report but also by the replies made by the Local Governments of India to whom the Government of India referred the three questions asked by the India Office. In detailing the replies, which were almost entirely unfavourable, the Government of India pointed out that if preferential treatment were granted to Indians in one part of East Africa, it would give a handle to the opponents of Indians in other parts of East Africa to urge preferential treatment for Indians in the shape of disabilities. The Government continued: "We have opposed and will continue to oppose unfair discrimination against our nationals overseas. We desire no discrimination in their favour. We ask for no more than equal rights. We can be satisfied with nothing less." And in conclusion the Government of India reiterated its suggestion for a Royal Commission to go into the whole question of the status of Indians throughout East Africa.

An exaggerated danger.—Making every allowance for the Dominion standpoint, those acquainted with the internal condition of India cannot but feel that the fears that the self-governing colonies may be deluged by Indian immigration are greatly exaggerated. The total number of Indians resident out of India is under two millions, and of these the majority are to be found in tropical countries. Ceylon alone has 900,000 of them. There is a quarter of a million in Mauritius, about another quarter of a million in British Guiana and the West Indies, 230,000 in the Straits Settlements and Malay States, and 35,000 in British East Africa (Kenia). Of the self-governing Dominions South Africa has by far the largest share, her Indian population being a little under 160,000, Natal alone accounting for 133,000. But this is not the result of ordinary migration. The nucleus of the South African Indian community was formed artificially by Natal herself. Until 1911, when it was stopped by the Government of India, there was for many years a steady stream of indentured immigration into Natal to supply labour to the sugar and other industries of that colony. The natural increase of the Indian population in South Africa is now much larger than the increase by immigration. In the whole Australian Commonwealth there are not more than 7,000 Indians. The principal movement of Indians to the Dominions occurred in 1907-8 the total immigration being under 7,000. Of this number it is estimated that not more than 1,200 now remain in Canada, there having been a heavy exodus to the United States, while quite a number have returned to India. The significance of these trifling totals must be viewed in the light of the conditions prevailing in India. Here, it is true, there is a vast population. Were these 319 millions subjected to the economic conditions of Europe and were they imbued by the adventurous and ambitious spirit of Europeans, there would be good ground for alarm in the Dominions at the possibility of an overwhelming influx of Indians. But those are precisely the conditions that do not obtain in the Indian Empire. The demand for labour in India is always greatly in excess of the supply. The tea-planters of Assam are obliged to compete with the Crown Colonies in an elaborate system of cooly recruitment. Labour-shortage is a chronic difficulty with the cotton mills of Bombay. As industrial expansion proceeds and agricultural methods improve, as more land is brought under cultivation, there must be a diminishing likelihood of emigration from India on any large scale. Add to this the inherent reluctance of the Indian to go far from home, and it will be apparent that the danger of "white men's countries" being swamped by Indian immigrants is at the least remote. It is never likely to assume such proportions as would pass the wit of statesmen to control. As a matter of fact, as has already been made clear above, the Imperial Conference has recognised the right of Self-governing Dominions to restrict and even to prohibit immigrations from other portions of the Empire. The question of immigration, then, now concerns only Crown Colonies, Protectorates, and similarly governed territories.

The fear of **Economic Competition** which has occasioned the present controversy in the Transvaal is equally unfounded. The Indian trader in the Transvaal caters for a very limited portion of the community—chiefly natives, "coloured" persons, and what in South Africa are called "poor whites" (that is, white unemployed)—though a certain number of respectable Europeans with small incomes visits his emporiums surreptitiously. In this sphere the Indian succeeds because the white trader who caters for the same classes of the community is usually neither as industrious, as thrifty, as honest, nor as skilful as the Indian. The truth is that the Indian problem does not in the eyes of the South African stand alone. It is a part, and a minor part, of the larger problems of race and colour that he has to deal with in his endeavour to make South Africa a white man's country. He is not actuated by malice against the Indian as such; it is merely that the Indian problem, coming as it does on the top of the many other similar problems, is regarded by him as an extremely annoying and unnecessary "last straw." On the other hand, the Indian views the disabilities under which he is put as so many stigmata of inferiority. There is thus considerable emotion on either side, and the problem is accord-

ingly difficult of solution. General Smuts is known to be favourably disposed towards Indians and his services to India as the only Dominion statesman in the War Cabinet have been many and conspicuous He may be relied upon to do as much to alleviate the position of the Transvaal Indian as the very strong anti-Indian feeling in the North of the Union will allow. On their side, the Transvaal Indian and his sympathisers in India would do well to recognise that this feeling exists, and refrain from weakening General Smuts's hands by demanding at the present juncture full civic rights and complete political equality. Such demands are construed by the anti-Indians as being a breach of the Smuts Gandhi agreement of 1914 (see above), which General Smuts offered as "a complete and final settlement;" and though a glance at the correspondence shows that Mr. Gandhi replied specifically that "some day or other these matters will require further and sympathetic consideration by the Government," yet nothing could be more unwise than to prosecute extreme demands at a time when the strength of anti-Indian feeling in the North makes it impossible for those demands to receive logical, much less sympathetic, consideration. For instance, it was doubtless the extremeness of the demands made by the Government of India in the resolution it prevailed upon the Imperial Conference to pass, which led to the South African delegates'' refusal to sign that resolution *(vide* earlier page). But while it was necessary for the Government of India officially to claim complete political equality for Indians throughout the Empire, including South Africa, the Indian public would be well-advised, in view of the state of popular feeling in South Africa, to accept for the time being from the South African Government as satisfactory something considerably short of complete political equality. If the South African people are made to feel that the Indians in South Africa and in India will not be satisfied with anything but complete political equality, the position of General Smuts will be rendered extremely difficult, and he will be unable to extract from his Parliament such concessions as might be possible if the Indian people were to recognise that progress must be slow, and that it will take time to educate the South African people to the state of political liberality demanded by the Indian Government. On the other hand, the Indian people have every reason to be dissatisfied with the report of the Asiatic Commission and to bring home to South African legislatures the realisation that India will not tolerate the imposition of further disabilities upon their countrymen in South Africa.

It is not so easy to advise moderation and forbearance to the INDIANS IN KENIA. There are 35,000 Indians in Kenia and only 11,000 Europeans, yet it is proposed as a generous concession, to grant two seats on the Legislative Council to Indians, while the Europeans have eleven seats. The idea of racial segregation wounds the Indians in their pride and honour, especially because it is openly based on "sanitary grounds." They have declared their willingness to submit to the severest, possible sanitary legislation, provided it is made to apply to both races. Compared with these two grievances the remaining causes of complaint sink to insignificance. By all the rights of prescription, Constitutional Law and natural justice, the Indians' case is good. India has had intimate connections with the East coast of Africa since the first century of the Christian era, and for over three hundred years Indians have been living and trading in Zanzibar. They were the pioneers of civilisation, trade and agriculture in what is now known as Kenia; they were the first to establish links with the interior; their labour constructed the railway from the coast to Lake Victoria Nyanza; and they have proved that, except in certain chosen spots, they are better able to endure the climate than Europeans. From the point of view of Constitutional Law the claim of the Indian is equally strong. The Indian Government is perfectly sound in its contention that in a Crown Colony or Protectorate all British subjects must be held to possess equal status. Kenia is not a Self-Governing Dominion, and arguments drawn from the analogy of Self-Governing Dominions are false. So long as Kenia is governed from Dowing-street, the Indian settlers have as much right to be heard and as much right to have their votes counted as the European settlers. As for natural justice, that surely dictates that the men who have done the work of pioneers, who have made the country their own for over three hundred years, and who have given that country prosperity, should not be deprived of their rights and the fruits of their labours by late comers in the Colony.

Indentured Emigration.—The institution of indentured labour in the tropical colonies of the Empire is one of long-standing. As far back as 1864 indentured emigration from India to the British West Indies was in progress under Government control. In the case of several of the tropical colonies there has been no interruption since then in the steady inflow of several thousands of Indian labourers annually. In Mauritius, the Straits Settlements, the Federated Malay States, British Guiana, Natal and Fiji the system for various reasons has come to an end; but in all those countries there is now a large population of Indians, permanent or temporary, engaged as free labourers or in independent positions.

The indentured system has been the subject of much controversy. But as much as indentures were abolished in Fiji on February 2nd, 1920, and in British Guiana in December 1919, the controversy has now only an historical interest. For a full account of the matter the reader is referred to pp. 467-8 of the Indian Year Book of 1916 to pp. 497-500 of the Indian Year Book of 1920.

Indians in the Colonies.—Statement shewing approximately the number of British Indian subjects in the various colonies and Dominions—

Trinidad	117,100
British Guiana	129,389
Jamaica	20,000
Fiji	60,000
Surinam	26,919
Reunion	3,012
Mauritius	257,697
Federated Malay States ..	210,000

Straits Settlements ..	.. Figures not available.
Kenia	.. 35,000
Tanganyika	.. 15,000
Cape Colony	.. 6,006
Natal .. .	.. 133,031
Transvaal	.. 10,048
Orange Free State ..	.. 106
Southern Rhodesia ..	.. Figures not available.
Australia	.. Do.
New Zealand	.. Do.
Canada	.. Under 2,000 (the number is uncertain).

Protected Emigration.—In a speech delivered in Council on September 5, 1916, H. E. the Viceroy stated that the Government of India were contemplating the control of the operations of persons engaged in supplying labour to the Colonies. "Labourers," said His Excellency, "have a right to emigrate if they wish, and it would be very unwise and very undesirable on our part to prevent them, and we are, therefore, trying to devise arrangements which will secure that recruitment in this country is conducted under decent conditions, that a proper sex ratio will be maintained and that on arrival in the country of their destination they will be properly treated and allowed to engage themselves on terms at least as free as those obtaining at present in the Malay Peninsula, where a labourer can leave his employer by giving a month's notice. I think it will be clear to all who have studied the question that the Government of India would be departing gravely from its duty if it allowed emigrant labour to leave this country without proper protection and safeguards. There are a certain number of labourers, I believe a very small number, who emigrate as genuine free labourers, that is to say unassisted by pecuniary help and uninvited by any interested agency. But, if we confine ourselves to the abolition of our existing indentured emigration, a position will arise in which the parties interested in procuring Indian labour will be free to induce labour to emigrate by pecuniary help under any conditions they like, so long as the labourer does not go under indenture. The abuses likely to arise out of such a state of things would be very serious. I need only refer to the state of affairs which existed before the amendment of the **Assam Labour and Emigration Act**, in connection with so-called free labour. The consequence of this system was, as Sir Charles Rivaz put it in his speech before the Legislative Council in 1901, that a horde of unlicensed and uncontrolled labour purveyors and recruiters sprang into existence, who under the guise of assisting free emigration made large illicit gains by inducing, under false pretences, ignorant men and women to allow themselves to be conveyed to Assam. These emigrants were, it is true, placed under labour contracts on arriving in that province, but the abuses complained of arose in connection with the recruitment and not with the contract. Similarly when the system of indentured emigration first arose in India the only caution required was that intending emigrants should appear before a magistrate and satisfy him as to their freedom of choice and their knowledge of the conditions they were accepting. It was shown, in a report submitted in 1840, that abuses undoubtedly did exist in connection with recruitment in India, abuses which the constantly increased safeguards provided by successive Acts of the legislature where designed to correct. Uncontrolled recruitment cannot, it is clear, be permitted under any circumstances."

Assisted Emigration.—In 1918 a committee sat in London to consider what form of assisted emigration should take the place of the indentures. Its report was issued about the middle of the year and the chief recommendations are here summarised.

Under this scheme the Indian will arrive in the colony entirely free from debt and of any liability for the cost of his introduction. He will be in no sense restricted to service under a particular employer, except that, for his own protection, a selected employer will be chosen for him for the first six months. This employer can be changed, with the approval of the Protector of Immigrants, if substantial reason can be adduced. From the time of his arrival the immigrant will be given land to cultivate for his own benefit. Each male adult employed in an agricultural industry will be granted for his personal use and cultivation a garden plot of one-tenth of an acre after six months' service and a larger plot of one-third of an acre will be made available whenever practicable by way of reward. At the end of three years' employment under any of the employers on the register steps will be taken to ensure that land is available for settlement in the simplest and cheapest manner. In each colony there will be a department responsible for the provision of sufficient land to meet all *bona fide* applications and for rendering it suitable for agriculture by adequate clearing, irrigation and drainage. These holdings will be up to five acres in extent, they will be subject to a reasonable annual rent in the case of lease-holds, and the settlements will be for a period of thirty years. Under the proposed system the immigrant can be proceeded against only by way of a civil suit in the ordinary course of law and will not be liable to any criminal penalties A minimum wage will be fixed, subject to periodical revision. During the first twelve months the children under eleven years will be entitled to free rations while children under five will be given a face milk ration during the whole time that their parents remain in the service of an employer on the register. The provision of married quarters separate from the "single" quarters will be made compulsory upon all employers of more than twenty adult Indian immigrants and will be insisted upon so far as possible in the case of all other employers on the register. This register will contain the names of only "approved employers" that is to say of persons desirous of employing assisted emigrants, who have applied to the Protector of Immigrants and who have been found on inquiry to be suitable. Repatriation will be assisted when it is desired. The emigrants will receive for himself and his dependents half the passage money after three years' service and a larger proportion up to the whole cost after seven years' service.

With regard to recruitment, Emigration Agents will be licensed and paid fixed salaries, with possibly additional money grants for meritorious work. Their work will be supervised by Inspectors of Emigration, who will be men of stand-

ing on a graded scale of pay. Over them will be an Emigration Commissioner, who will be a Colonial Civil Service official, and a Protector of Immigrants, appointed by each Local Government to supervise emigration in the province affected. In each colony will be a Protector of Immigrants. The Emigration Depots will be visited by non-official gentlemen of standing in the district as also will be the Central Depot. The emigration of whole families will be encouraged but persons below the age of eighteen will be assisted to emigrate only when accompanied by their parents or guardians. Women unaccompanied by their families will not be assisted and the rule requiring a certain proportion of women to men will be abolished.

The report was published at a time when the political energies of India were concentrated on the development of the Indian constitution and the pending visit of the Secretary of State to discuss these questions on the spot. It attracted little attention. So far as opinion was expressed, whilst recognising that the system was an immense advance on the system of indenture, it was thought undesirable for Government to take so large a part in the direction of emigration to distant lands.

British Guiana and Fiji Emigration Schemes.—During 1920 the Indian Government had the opportunity to apply the policy of assisting and controlling emigration outlined in the two preceding paragraphs; for early in the year deputations from British Guiana and Fiji visited India for the purpose of obtaining the consent and sympathy of the Government with regard to schemes for recruting free labour from India. A Committee was appointed by the Imperial Legislative Council to give hearings to the deputations and to report upon the schemes. The Committee sat for several days in Delhi, and subjected the deputations to exhaustive cross-examination. The British Guiana deputation stated that the recent change in Imperial policy as regards preference and the urgent demand for food stuffs all over the world made it incumbent upon them to set aside £ 6,000,000 to be offered as inducements to emigrants. For the first three years not more than five thousand adults a year would be given free passages. On arriving in British Guiana, they could, if desirous of working, obtain land of their own, either agricultural or pastoral, on easy terms in small or large holdings. If the settlers preferred employment, the Guiana Government guaranteed local rates of pay, which, for piece work on a sugar estate on a seven hours' day, amounted to three rupees for males and for females at lighter work about half of that. Housing accommodation would also be provided. The cost of living was under 40 per cent. of the ordinary male wage. The earner could save at least a rupee a day. Wages would be controlled by official arbitration boards to prevent variation unfair to the wage-earner. Reward grants of five acres of coast or river land specially protected by embankment from flood prepared for irrigation, drainage and cultivation would be given to families after three years' agricultural work in the Colony. The Indian Government was asked to appoint its own official, at the cost of the Colony, to watch the interests of the settlers, At the request of the Indian Government's supervising officer, any individual or family would be repatriated free of charge at any time while if such a request emanated from the individual or family, the Guianese Government would pay half the estimated cost of repatriation at the end of three years' residences three-fourth of the cost at the end of five years, and free of charge at the end of seven years. Repatriation would not affect any land or other rights fully acquired. Cheap return tickets would be provided to those wishing to return on family reasons. This would secure a regular commercial intercourse between two countries. A limited number of professional men such as doctors, engineers, clerks, school masters, etc., would be given passages, either free or at very low rates. One priest or minister of religion for each religious group would be taken free on each voyage. Guarantees of continuance of the existing privileges could be furnished by the Colony, and the Colonial Office stating that their definite policy was the continuance of political and commercial equality of all races. If necessary, a Declaration Ordinance could be passed in Guiana, recording the actual position.

The scheme put forward by the **Fijian deputation** was a system of free and voluntary State aided emigration, the object being the encouragement of the settlement of Indians. The emigrant would be free of any financial liability connected with the cost of his introduction in Fiji and would in no way be restricted to service under any particular employer. A Protector of Emigrants would be appointed by local Governments in India to exercise supreme control of emigration in the Province. At the ports of departure, Colonial camps would be started which could be visited by Indians of standing nominated by the Provincial Governments. The Colonial Government would bear half the cost in the case of those wishing to return to India if they had stayed in the Colony at least three years, three-fourth of the cost, if it was five years, and the whole cost if seven years. Land suitable for settlement would be available for all who desire it. Indians in Fiji already enjoy the same facilities for primary education as were possessed by other inhabitants of the Colony. Under the Education Ordinance of 1916 provision was made for grants in aid to any private or vernacular school for Indians. Government schools were being established at necessary centres of the settlement where assisted schools did not exist. The deputation expressed itself as unable to give guarantees similar to those offered by the Guiana deputation with regard to equality of political status, but it assured the Committee that there was no racial animosity in Fiji towards Indians, and that there was no reason to anticipate that any such animosity would arise in the future.

The Committee in its Report pronounced favourably upon the two schemes, but suggested that, before definitely consenting to further the proposed emigration, the Government of India should appoint Commissions of three Indians to go to British Guiana and Fiji to investigate the conditions there. This report was accepted by the Imperial Legislative Council, but during 1920 it was not possible to appoint the two Commissions as a satisfactory *personnel* could

not be found owing to the reluctance of leading Indians to leave India so shortly before the coming into being of the new Indian constitution.

Unrest in Fiji.—It was unfortunate for the success of the Fiji free immigration scheme that just about the time when the deputation was doing its best favourably to impress the Indian Government, news reached India of wholesale unrest, strikes, and rioting among the Indians in Fiji. The whole story was published later in the year in the official despatches of the Fijian Government, and it then became apparent that the tales that had reached India had greatly exaggerated the seriousness of the affair. It was early in February that the Indians went on strike, for purely economic reasons. The Government displayed a judicial attitude and suggested the appointment of a Commission to examine the Indians' grievances. There was at first a tendency on the part of the Indians to accept the suggestion and await the report of the Commission; but a certain Indian named Dr. Manilal, who was under sentence of banishment from certain portions of the Island owing to his defiance of the Government in regard to a law suit, succeeded in stirring up the racial passions of a large number of the Indians, and from then onwards the unrest was more racial in its character than economic. Rioting took place during the latter part of February. It was not of a serious nature, but this was due largely to the preventive measures taken by the authorities and to the tact and restraint shown by the police and military. The riots were quelled practically without bloodshed; but numerous Indians were arrested. The Government then took steps to ensure the banishment of Dr. Manilal, to whom they ascribed the trouble, from those parts of the Island where his influence was greatest. For the rest of the year the Indians agitated for his return, and eventually towards the end of the year 30,000 Indians demanded to be repatriated. To this demand the Fiji Government expressed its willingness to accede as soon as shipping could be provided for the purpose. In making this demand the Indians were also actuated, so they declared, by certain economic and political grievances; but reliable information from Fiji was difficult to obtain, and while it is known that the sugar companies have not been generous in the matter of increasing wages to meet the increased cost of living, and while the absence of adequate representation upon the Fijian Legislature is a sore point with the Indians, it is not possible to say whether the grievances under which they suffer are of so serious a nature as to justify 30,000 Indians out of about 60,000 in selling up their homes and returning to India. The attitude of the Fijian Government is that they are prepared to consider seriously the economic grievances of the Indians provided that they co-operate loyally with the Government in the matter; that it was intended, and is still intended to provide proper representation for Indians in the Fijian Legislature, but that the unrest throughout the past year has prevented the Government from taking the necessary steps to that end; and that the main cause of the trouble is the personally embittered and recalcitrant Dr. Manilal, who is repudiated as a leader by the loyaler and better-class Indians in the Island.

During 1921.—The Government of India entered into negotiations with the Fijian Government with regard to the state of unrest in Fiji and the Fijian Government's immigration scheme. The negotiations were rendered extremely difficult owing to the precipitate and ill-advised return to India of a large number of Indians from Fiji. When these Indians arrived in India they found that, so far from labour conditions being favourable, as they had been told, there was no work obtainable for them. Moreover, many of these Indian had lost caste during their sojourn in Fiji, and found themselves treated as pariahs by their relatives and caste brethren in India. These returned immigrants were soon reduced to a state extreme penury and hardship, and committees of relief had to be formed to help them to return to Fiji. The Fijian Government, however, generously refrained from making capital out of the desire of these people to return to Fiji when they discovered that the rosy tales concerning India told by agitators in Fiji were false; and towards the end of the year the negotiations between the two Governments terminated in complete agreement. The Fijian Government undertook to introduce an Ordinance into the Legislative Council giving Indians political equality, and the Government of India at the same time, undertook to appoint at once the committee, which had been recommended by the Commission of the Indian Legislative Council, "to inquire into the conditions of life in Fiji and advise the Government whether Fiji offers a suitable field for Indian colonisation." The *personnel* of the Committee, as selected by the Government of India, was Pandit Harday Nath Kunzru, Mr. Corbett, and Mr. Sastri. At the same time the British Guiana Government entered into a similar agreement with the Government of India whereby the British Guiana Government undertook to introduce legislation assuring Indian immigrants, in the Colony of equal political rights, while the Government of India undertook to send a deputation to British Guiana to investigate local conditions with regard to their suitability for colonisation by Indians.

Indians in Great Britain.

More than sixty years have gone by since the Parsi community, in the persons of the late Dadabhai Naoroji and other members of the firm of Cama & Co., led the way in the sojourn of Indians in England for business purposes. This lead it has since maintained, though there are both Hindu and Mahommedan business men firmly established there Nor are the professions unrepresented, for there are in London and elsewhere practising barristers, solicitors and medical men of Indian birth. Two Indians have sat in the House of Commons. An Indian has served since 1910 on the Judicial Committee of the Privy Council, and others are to be appointed. Three Indians are on the Secretary of State's Council; and in 1919 another in the person of Lord Sinha led the way as the first Indian to be raised to the peerage and to be appointed a member of the Home Government. An Indian member of the I. C. S. is Secretary to the High Commissioner. The early years of the present century saw the gathering of a new Indian element in permanent residence—that of retired officials and business men, or people of independent means who from preference or in order to have their children educated in England, leave the land of their birth and seldom if ever visit it again Further, the stream of Indian summer visitors includes wealthy people who come regularly. In the first years of the war, thousands of our valiant Indian soldiers. wounded or invalided from Flanders, went to England to be nursed back to health in the well-equipped and admirably administered Indian hospitals, some in Hampshire but chiefly at Brighton where the fact has been commemorated by a *chattri* on the site of the burning ground on the South Downs and an Oriental gateway to the Royal Pavilion, the latter provided by Indian subscribers. There is an Indian Social Club, founded in 1912, with Sir M. M. Bhownaggree as president, which arranges for dinners and other functions to celebrate Indian festivals or to honour Indian visitors of special distinction. Sectionally, however, the only Indian community to be fully organised is that of the Parsis. They have an incorporated and well-endowed Parsi Association of Europe, and have established " Zoroastrian House " (168, Cromwell-road, S.W. 5) as a communal centre.

The Students.

Under normal conditions it is the student community which constitutes the greatly preponderating element and creates an Indian problem. Its numbers multiplied ten or twelvefold in the quarter of a century before the war. After a very considerable temporary check caused by the Great War the number rapidly expanded from 1919 in spite of pressure in college accommodation. In addition to the ordinary graduate or under-graduate student, there are many youths of good family, some of them heirs of Native States, admitted into our public schools, such as Eton and Harrow. There are some 600 Indians at the Inns of Court. Since the war there has been a welcome and remarkable increase in the number of technical and industrial students. Altogether including technical and medical students, there must be well over 2,000 young Indians in London, Edinburgh, Cambridge, Oxford, Glasgow, Manchester, Birmingham, Leeds, Sheffield and Liverpool and a few other centres.

The Advisers.

It is well known that until a few years ago the young Indians, apart from inadequately supported unofficial effort and the chance of coming under the influence of English friends of their families, were practically left to their own devices. But in April 1909 Lord Morley, created for their benefit a Bureau of Information and appointed Dr. (now Sir) T. W. Arnold to the charge of it under the title of Educational Adviser. The Bureau was located at 21, Cromwell Road, together with the National Indian Assiociation and the Northbrook Society, which were thus given spacious quarters for their social work among the young men. (For Burmese students distinct club accommodation is provided, partly by subventions from Indian revenues, in the commodious Albion House, St. Peter's Square, Hammersmith, W. 6. In India provincial advisory committees exist to help and advise intending students. The work of the Bureau rapidly expanded, and in consequence Lord Crewe in 1912 re-organised the arrangements under the general charge of a Secretary for Indian students, Mr. (now Sir) C. E. Mallet who resigned at the close of 1916. He was succeeded by Dr. Arnold under the designation of Educational Adviser for Indian Students to the Secretary of State. Mr. N. C. Sen followed Dr. Arnold as Local Adviser in London, and there are corresponding officers at the modern provincial universities.

These arrangements underwent far reaching revision in the autumn of 1920 in connection with the setting up, under the Act of the previous year of a High Commissionership for India in the United Kingdom. The "agency work" Sir William Meyer, took over from the Secretary of State included that connected with Indian students. Sir T. W. Arnold accepted an appointment long pressed upon him as Professor of Arabic at the School of Oriental Studies, and the High Commissioner appointed Mr. N. C. Sen and Dr. T. Quayle as Joint Secretaries for the Indian Students' Department. The administrative work hitherto divided between the India Office and 21 Cromwell Road was consolidated at the offices of the High Commissioner in Grosvenor Gardens, S. W. 1, thereby obviating a good deal of duplication of files and papers.

Though the organization has many hard things said of it by young Indians when they foregather it has been of the greatest service to them in almost all cases of individual difficulty in educational matters, and is freely resorted to by some of its most pronounced critics. There are some 80 Government scholars under the care of the department. The whole situation was investigated by a committee of inquiry which sat in 1921 under the chairmanship of Lord Lytton.

The Bureau has been singularly successful in opening closed doors and mitigating grievances.

At Oxford and Cambridge, where naturally the difficulties of admission have been most pronounced, it has paved the way to the creation of University machinery to replace its own operations. The Oriental Delegacy at Oxford and the Inter-collegiate Indian Students' Committee at Cambridge now undertake all the work formerly carried on by the Local Advisers, and thus Indian undergraduates are given a welcome *locus standi*. Nowhere is the problem arising from applications for admission far exceeding the possible accommodation more acute than at the older universities. Quite irrespective of the nationality of applicants many hundreds have to be turned away, owing to the deficiency of accommodation in lecture rooms and laboratories and there is a still more marked lack of lodging. Hence the university authorities are compelled to select those applicants most likely to benefit by their opportunities. It can at least be said that to the full extent of the accommodation with due regard to other responsibilities, the British universities are always ready to admit Indian students of approved ability and attainment, what they cannot stand is the lazy, incompetent and untrained man. A matter still requiring adjustment is the admission of Indians to the O. T. C. Generally speaking, however, we may accept the conclusion of Sir T. Morison's Committee on State Technical Scholarships in 1913 that the difficulties encountered by young Indians in supplementing academic instruction by technical experience in factories and workshops are general in character, being also applicable to their English contemporaries, and that there is "on the whole very little evidence of a racial prejudice against Indians." Nor need any youth go to England under misapprehension as to the facilities for his education and their limitations. The excellent "Handbook of Information for Indian Students" issued by the National Indian Association and the Advisory Committee, now in its seventeenth edition (1920) supplies all relevent facts and advice; and on personal details, the Indian Advisory Committees can be consulted. A general point strongly urged in the "Report of the Indian Students' Department" to March 31st, 1921, by Mr. N. C. Sen is that, save in exceptional cases "it is practically useless to come to England to join a university with less than an intermediate examination pass, as that is the minimum qualification from the entrance examination....." Students not adequately qualified for admissions before arriving in England are obliged to spend time and money in preparing for a qualifying examination which might well have been taken before they left their homes.

The students have hosts of non-official friends and helpers. Under the presidency of Lord Hawke and the chairmanship of Lord Carmichael, an Indian Gymkhana Club in 1921 acquired its own sports ground at Osterley, the total cost of purchase and equipment being estimated at £15,000. Generous gifts were made by some Ruling Princes and others, particularly the Maharaja of Patiala, but further help is required. The cricket eleven of the Club has an excellent record in matches at Lords and the Oval and with suburban clubs.

A notable development of 1920 was the opening of the "Red Triangle" Shakespeare Hut in Bloomsbury, off Gower Street, as a union and hostel for Indian and Ceylonese students up to the number of 500. The hostel helps to meet a need that has long been felt and has become more acute with the post-war inadequacy and expensiveness of housing accommodation. Some of the 130 beds are reserved for students of British parentage, in order to guard against the danger of Indians forming a colony segregated, save in the classroom, from their English contemporaries. The hostel is Indian both in conception and control, the general secretary, Mr. P. A. Kunganadhan, being responsible not to the National Council of Y. M. C. A.'s in London but to the Indian National Council in Calcutta. While the organization has a definitely moral and spiritual, as well as a social purpose, it is not a proselytizing agency.

Lately there has been considerable growth of the number of Indian girls and women studying in Great Britain, and at least one is reading at the Inns of Court. But it is chiefly for medical or teaching training that Indian ladies come. The Secretary of State has given financial help to an additional hostel connected with the London School of Medicine for Women on conditions 'providing for the reception of Indian women students.' Real need exists for a hostel of a more general character, possibly on lines similar to those maintained for Indian men at 21, Cromwell Road.

Appointments to the Indian Services.

Full details of the regulations governing appointments to the Indian Services are published in the India Office List. The more essential particulars, except as regards the Civil Service and Police,—of which fuller details are given elsewhere in this book—are given below.

Indian Agricultural Service.

The appointments in the Indian Agricultural Service include those of Deputy Director of Agriculture, Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Bacteriologist, Professors of Agriculture, Chemistry and Botany at Agricultural Colleges, and the like. Some of these are included in the Imperial Department of Agriculture under the direct control of the Government of India, but the majority are included in the Departments of Agriculture of the several provinces of India. In some cases candidates will be appointed direct to these posts, but in most cases they will undergo a further course of training in India in Indian agriculture, and will be appointed to posts, for which in the opinion of the Government they are considered suitable, on the regular establishment as vacancies occur. Appointments are made by the Secretary of State for India as occasion may require and inquiries regarding them should be addressed to the Revenue Secretary, India Office, London, S. W. 1. Candidates must, as a rule, be not less than 23, nor more than 30 years of age. In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in honours in science or the diploma of a recognised school of agriculture or other like distinction; (*b*) practical experience of farming. Candidates for research and teaching posts must possess a University degree or other similar qualification in the special science concerned, and preference will ordinarily be given to those who have spent a period of two years in research work under a scientist of established reputation and have studied the science from an agricultural point of view. Importance is also attached to bodily activity and ability to ride, and selected candidates have to undergo an examination by the Medical Board of the India Office as to their physical fitness for service in India.

The salary attached to posts in the Indian Agricultural Service will ordinarily be:—

	Rs.	
For the first year	.. 500	per mensem.
,, second year	.. 550	,,
,, third year	.. 600	,,
,, fourth and subsequent years	.. 650	rising by annual increments of Rs. 50 a month to Rs. 1,750 a month.

Candidates who are required to undergo a further course of training in India as explained above will be appointed on this scale of salary, commencing on a pay of Rs. 400 Where, for special reasons, a candidate is recruited for direct appointment to one of the regular posts under paragraph 1, his initial pay will be determined with reference to the special qualifications on the length of European experience required for the appointment for which he is specially selected, but his subsequent increments of salary will be regulated by the foregoing scale. In addition to this scale of pay, officers filling appointments directly under the Government of India, as distinguished from appointments under Local Governments (but not including officers holding supernumerary posts, the post of Inspector-General, or the post of Director of the Pusa Institute) will be eligible for local allowances conditional on approved good work, and the Government reserves to itself the fullest discretion as to granting, withholding, or withdrawing them.

Indian Civil Veterinary Department.

The officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the Army.

The work of the Department includes—

(*a*) Educational work in veterinary colleges;
(*b*) Horse and mule breeding;
(*c*) Cattle disease and cattle breeding.

Appointments to this Department are made, as vacancies occur, by the Secretary of State for India. Candidates must not (except on special grounds to be approved by the Secretary of State) be over 30 years of age but this does not apply to candidates who have served for at least one year during the war in His Majesty's Forces, or who have been discharged, after less than one year's service, on account of wounds or sickness resulting from such service and must possess a diploma from the Royal College of Veterinary Surgeons. Evidence of a knowledge of bacteriology, and of capacity for carrying out original research, will be specially taken into account in estimating the claims of candidates. Good health, a sound constitution, and active habits are essential, and candidates must be certified by the Medical Board of the India Office to be physically fit for service in India.

Pay will be as follows:—On arrival in India Rs. 500 a month, rising by Rs. 50 each year to Rs 1,200, which rate will continue from the beginning of the 16th to the end of the 20th year of service; after the beginning of the 21st year Rs. 1,500 a month.

Ecclesiastical Establishments (Church of England).

Appointments of Chaplains on Probation are made from time to time by the Secretary of State for India, as vacancies occur. Candidates for these appointments must be Priests who are between the ages of twenty-seven and thirty-four years, and have been for three years altogether in Holy Orders. Applications for nominations should be submitted to the Indian Chaplaincies Board of the Church of England. (Chairman Rev. Canon B. K. Cunningham, M. A., O.B E., Chaplain to His Majesty the King Westcott House, Cambridge.)

A Chaplain serves on probation for two years (*a*); if confirmed in his appointment at the end of that period, he will be admitted as a Junior Chaplain.

The salaries of Chaplains are :—

For the first year ..600 per mensem.
„ second year ..625 „
„ third year ..650 „
„ fourth and subsequent years ..700 rising by annual increments of Rs. 25 to Rs 800 per mensem in the ninth year.
For the tenth and subsequent years ..850 rising by annual increments of Rs. 50 to Rs. 3,250 in the eighteenth year
„ Nineteenth and subsequent years ..1,350 per mensem.

The retiring pay of Chaplains is regulated by the following scale :—

	Per annum £	s.	d
After 23 years' service, with an actual residence in India of 20 years	480	0	0
On Medical Certificate.			
After 19 years' actual residence in India, including the period of probation	430	0	0
After 13 years' ditto	250	0	0
After 10 years' ditto	160	0	0

Ecclesiastical Establishments (Church of Scotland).

The appointments of Chaplains of the Church of Scotland on probation are made from time to time by the Secretary of State for India, according as vacancies occur. Candidates for these appointments must have been licensed for three years and be under thirty-four years of age. Applications for nominations should be submitted to the General Assembly's Committee on Indian Churches along with testimonials based on a personal knowledge of the candidate's qualifications. Chaplains serve on probation for two years (*a*); if confirmed in their appointment at the end of that period, they will be admitted as Junior Chaplains.

The salaries of Chaplains are :—

For the first year ..Rs 600 per mensem rising by annual increments of Rs. 25 to Rs. 800 in the ninth year.
For the tenth year ..Rs. 850 per mensem rising by annual increments of Rs. 50 to Rs. 1,250 in the eighteenth years and thereafter Rs. 1,300.

The retiring pay of Chaplains is regulated by the following scale :—

	Per annual. £	s.	d.
After 23 years' service, with an actual residence in India of 20 years	480	0	0
On Medical Certificate.			
After 19 years' actual residence in India, including the period of probation	430	0	0
After 13 years' ditto	250	0	0
After 10 years' ditto	160	0	0

Educational Appointments.

The Indian Educational Service comprises those posts in the Educational Department to which appointments are made in England by the Secretary of State, and is thus distinguished from the Provincial Educational Services which are recruited exclusively in India. It consists of two branches, the teaching, including Principalships and Professorships in the various Government Colleges and Head masterships in certain High Schools; and the administration including Inspectorships of Schools; but officers may be transferred at the discretion of Government from one branch to the other, and the conditions of pay and service are the same for both. It also includes certain special appointments, such as those of Superintendents of Schools of Art, for which special qualifications are required and special terms of engagement are prescribed. Officers of the teaching branch may be required to undertake duties in connection with the supervision of students in hostels or boarding houses, and with the direction of their studies and recreations. Appointments are made by the Secretary of State as occasion may require. Only laymen are eligible, candidates must as a rule be not less than 23, nor more than 30 years of age, but exceptions are sometimes made as regards the maximum limit only. Candidates must be British subjects, and must furnish evidence of having received a liberal education.

In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in Honours, or equivalent distinction; and (*b*) qualifications in special subjects, depending on the nature of the vacancy to be filled. In selecting candidates for inspecting appointments, weight is given to injustice

talent, capacity for organization and knowledge practical or theoretical, of educational methods.

There is in every Province a Director of Public Instruction. The posts of Director of Public Instruction are reserved for the Indian Educational Service so long as members of that Service can be found well qualified to fill them. Their pay differs in different Provinces:—

Three receive a salary of Rs. 2,500—100—3,000 a month.
Four receive a salary of Rs. 2,250—100—2,750 a month.
One receives a salary of Rs. 2,000—100—2,500 a month.
One receives a salary of Rs. 1,500—100—2,000 a month.
One receives a salary of Rs. 1,500 a month.

Indian Forest Service.

The Secretary of State for India in Council makes appointments of Probationers for the Indian Forest Service, according to the numbers annually required.

Candidates must be not less than 19 but under the age of 22 years.

Candidates must have obtained a degree with Honours in some branch of Natural Science in a University of England, Wales or Ireland, or have passed the Final Bachelor of Science Examination in Pure Science in one of the Universities of Scotland. A degree in Applied Science will not be considered as fulfilling these conditions. Candidates are required to produce evidence that they have a fair knowledge of either German or French.

The ordinary period of probation will be two years. During that time probationers will be required to pass through the Forestry course at one of the following Universities—Oxford, Cambridge or Edinburgh (subject to the arrangement of a suitable course)—becoming members of that University, if not so already; to obtain the Degree or Diploma in Forestry which it grants; and to satisfy such other tests of proficiency as may be deemed necessary.

During the vacations, the Probationers will, under the direction and supervision of the Director of Indian Forest Studies appointed by the Secretary of State for India in Council, receive practical instruction in such British and Continental forests as may be selected for the purpose.

The Secretary of State for India in Council will make payments to each Probationer at the rate of £200 annually, not exceeding a total of £400.

Probationers who obtain a Degree or Diploma in Forestry, and also satisfy such other tests of proficiency as may be prescribed, will be appointed Assistant Conservators in the Indian Forest Department, provided they are of sound constitution and free from physical defects which would render them unsuitable for employment in the Indian Forest Service.

The sanctioned scale of the service at present is:—

	Rs.
1 Inspector-General of Forests	3,250 a month.
1 Assistant Inspector-General of Forests	
5 Chief Conservators (Bombay, United Provinces, Burma and Central Provinces) ..	2,500-125-2,750 a month.
25 Conservators, in three grades (including President, Forest Research Institute and College and one temporary post of Conservator for Kumaun Circle, United Provinces)	1,750-50-2,000 a month.
227 Deputy and Assistant Conservators	Initial salary Rs. 450, rising by annual increments of Rs. 50 to Rs. 850 in ninth year. Efficiency bar here. Then Rs. 1,000 in tenth year with annual increments of Rs. 50 to Rs. 1,500 in 20th year, Rs. 1,500 for 21st year and 22nd years, Rs. 1,600 in twenty-third year.

After a service of not less than 20 years, a retiring pension is granted not exceeding the following amounts:—

Scale of Pension.		
Years of Completed Service.	Sixtieths of Average Emoluments.	Maximum Limit of Pension.
20 to 24		Rs. 4,000 a year
25		„ 5,000 „
26		„ 5,200 „
27		„ 5,400 „
28		„ 5,600 „
29		„ 5,800 „
30		„ 6,000 „

Forest Engineering Service.—A Press *communique*, dated Delhi, the 29th January, 1920, states:—It has long been recognised that the development of the Forest Resources of India is hampered by the inaccessibility and isolation of forest bearing tracts and the absence of up-to-date methods of extracting and utilising timber. The question of obtaining experts to deal with these problems has recently been considered by the Government of India, and it has now been decided, with the approval of His Majesty's Secretary of State for India, to create a Forest Engineering Service, paid on the same scale as the Imperial Forest Service. It is proposed that the recruits to the new service should be trained in Canada and America, where the subject of timber extraction and utilisation has long been studied and improved methods have been introduced under conditions approximating to those to be encountered in many parts of India and Burma.

Indian Geological Survey.

The Geological Survey Department is at present constituted as follows:—

	Monthly Salary. Rs.
1 Director	3,000.
6 Superintendents	From Rs. 1,500 to Rs. 2,000.
22 Assistant Superintendents	From Rs. 550 to Rs. 1,450.
1 Chemist	550 rising to Rs. 1,450 per mensem.

Appointments to the Department are made by the Secretary of State for India. The age of candidates should not exceed 25. Besides a good general education, a sound education in geology is essential: a University degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India. First appointments are probationary for two years.

India Office.

Vacancies in the clerical establishment of the Secretary of State for India are filled from among the successful candidates at the General Examinations (Class I, and Second Division), which are held from time to time by the Civil Service Commissioners for appointments in the Home Civil Service. The Examination for Class I. Clerkships is the same as the open Competitive Examination for the Civil Service of India. Further particulars may be obtained upon application to the Secretary, Civil Service Commission, Burlington Gardens, London, W.

Indian Public Works Department.

The Secretary of State for India in Council makes appointments of Assistant Engineers in the Public Works Department of the Government of India.

Candidates must have attained the age of 21, and not attained the age of 24 years.

Candidates must produce evidence that they have (1) obtained one of the University degrees mentioned in Appendix I., or (2) passed the A.M.I.C.E. examination, or (3) obtained such diploma or other distinction in Engineering as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

The Engineer Establishment of the Indian Public Works Department consists of a staff of engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources:—

(1) Officers of Royal Engineers.

(2) Persons appointed by the Secretary of State by selection from the United Kingdom.

(3) Persons educated at the Government Civil Engineering Colleges in India, and appointed by the Government of India.

(4) Occasional admission of other qualified persons.

3. The various ranks of the department are as follows:—

Superintending Engineers—Rs. 1,750 rising by annual increments of Rs. 100 a month to Rs. 2,150 a month.

Chief Engineers—Rs. 2,750 rising by annual increments of Rs. 125 a month to Rs. 3,000 a month.

Executive Engineers Senior—From Rs. 775 to Rs. 1,625 per month.

Assistant Executive Engineers—Rs. 525 to Rs. 1,225 per month.

The increments will be given for approved service only and in accordance with the rules of the Department.

Exchange compensation allowance will not be granted to future entrants.

Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and are made wholly by selection; mere seniority is considered to confer no claim to promotion.

State Railways.

The Secretary of State for India in Council will, from time to time as may be required, make appointments of Assistant Traffic Superintendent on Indian State Railways.

Candidates must possess one or other of the following qualifications, *viz.*:—

(*a*) Not less than two years' practical experience of work in the Traffic Department of a British or Colonial Railway or of a military railway, together with evidence of a sound general education.

(*b*) A degree or diploma of any teaching University in the United Kingdom granted after not less than three years' study in that University, or a technical diploma or certificate recognized by the Secretary of State.

(*c*) Or produce evidence that they had entered with reasonable prospects of success, upon the course leading to such degree or diploma, but were prevented from continuing it by the fact of joining His Majesty's Forces.

The establishment of the Superior Traffic Department of Indian State Railways consists of a staff of officers, military and civil, engaged on the various railways administered by the State in India. This establishment is recruited from the following sources:—

(i) Officers of Royal Engineers;

(ii) Persons appointed by the Secretary of State by selection from the United Kingdom;

(iii) Persons appointed in India;

(iv) Occasional admission of other qualified persons.

The various ranks of the Department are as follows:—

Traffic Managers .. Rs 2,300—100—2,500 and Rs 2,500 fixed.

Deputy Traffic Managers .. Rs. 1,750—50—2,100

District Superintendents:—

Class II.—Rs. 700 rising up to Rs. 1,550 per mensem.

Assistant Superintendents:—

Class III.—Rs. 450 rising up to Rs. 1,150 per mensem.

The establishments of the Superior Locomotive and Carriage and Wagon Departments of Indian State Railways consist of officers engaged on the various railways administered by the State in India. These establishments are recruited from the following sources:—

(i) Persons appointed by the Secretary of State by selection from the United Kingdom;

(ii) Persons appointed in India;

(iii) Occasional admission of other qualified persons.

The various ranks of the Departments are as follows:—

	Salary per mensem
Locomotive Superintendents ..	Rs. 2,300—100—2,500 and 2,500 fixed.
Deputy Locomotive Superintendent ..	1,750—50—2,000
Carriage and Wagon Superintendents	2,000—100—2,300
Deputy Carriage and Wagon Superintendents	1,750 fixed.

Both Departments.

District Superintendents:—

Class II.—Rs. 775 rising to Rs. 1,625.

Assistant Superintendents:—

Class III.—Rs. 525 rising to Rs. 1,225.

Telegraph Department.

There are not at present any vacancies in the Superior Establishment of the Indian Telegraph Department, and it is considered unnecessary for the present to recruit any Assistant Superintendents from the United Kingdom. The arrangements for the future recruiting of the Department have not been finally settled The various ranks of the superior establishment are as follows:—

	Maximum Salary per mensem Rs.
Director-General..	3,000
Deputy Director-General	2,000
Directors	1,800
Deputy Directors	1,600
Chief Superintendents, 1st Class ..	1,400
Chief Superintendents, 2nd class ..	1,250
Superintendents, 1st Grade	1,000
„ 2nd Grade	850
Assistant Superintendents, 1st Grade .	700
„ „ 2nd Grade.	550
„ „ 3rd Grade .	450
„ „ 4th Grade .	350

His Majesty's Indian Army.

A certain number of appointments to the Indian Army are offered to Cadets of the Royal Military College, and a certain number to candidates from the Universities. All King's Cadets (British and Indian) and Honorary King's Cadets nominated by the Secretary of State for India in Council have the option, during their last term at the Royal Military College, of electing for appointment to the Unattached List for the Indian Army, or for appointment to commissions in British Cavalry or Infantry. The appointments to the Unattached List for the Indian Army remaining after the claims of the King's Cadets and Honorary King's Cadets (Indian) have been satisfied are allotted in order of merit to Cadets who satisfy the requirements of the Regulations respecting admission to the Royal Military College, and who elect to compete for such appointments, at each final Examination at Sandhurst.

King's India Cadetships.

Twenty King's India Cadets are nominated each year from among the sons of persons who have served in India in the Military or Civil Service of His Majesty or of the East India Company. A Candidate is not eligible for nomination as a King's India Cadet if he be under 17 or over 19½.

A candidate is not eligible for nomination, and his claims will in no circumstances be considered until he (*a*) has qualified at the Army Entrance Examination; or (*b*) is prepared to attend the next examination. The fees of King's India Cadets at the Royal Military College are not payable by the State, except in cases where, after due inquiry, their pecuniary circumstances are ascertained to be such as to justify the payment.

Honorary King's India Cadetships.

Three Honorary King's India Cadets are nominated annually by the Secretary of State for India. Such Cadets are appointed from—

(*a*) The sons of officers of the Indian Army who where killed in action, or who have died of wounds received in action within six

months of such wounds having been received, or from illness brought on by fatigue, privation or exposure, incident to active operations in the field before an enemy, within six months after their having been first certified to be ill.

(*b*) The sons of officers of the Indian Army, who have obtained the brevet substantive rank of Major or Lieutenant-Colonel, and have performed long or distinguished service.

An Honorary King's Cadetship carries with it no pecuniary advantage.

Queen Alexandra's Military Nursing Service for India.

The Nursing establishment is for duty with British officers and soldiers, and at present consists of:—

4 Lady Superintendents

16 Senior Nursing Sisters.

71 Nursing Sisters.

The numbers in these grades are subject to alteration.

Nursing Sisters at the time of appointment must be over 27 and under 32 years of age. Candidates for the Service must have had at least three years' preliminary training and service combined in the wards of a British general hospital or hospitals of not less than 100 beds in which adult male patients receive medical and surgical treatment, and in which a staff of Nursing Sisters is maintained.

The duration of a term of service, for all grades of lady nurses, is five years. A lady nurse who has been pronounced by a Medical Board to be physically fit for further service in India, may be permitted to re-engage for a second and third term at the option of the Government, and again for a fourth term, or until the age of compulsory retirement, if in all respects efficient and if specially recommended by the Commander-in-Chief in India. But a lady nurse will not under any circumstances be permitted to remain in the service in the grade of Lady Superintendent beyond the age of 55 years, or in either of the other grades beyond the age of 50 years.

Rates of Pay.

(In addition to free quarters, fuel, light, and punkah-pullers.)

	Rs. per mensem.
Chief Lady Superintendent (including allowance of Rs. 100)	750 ,,
Lady Superintendent ..	450 ,,
Lady Superintendent, if not provided with free quarters, etc.	520 ,,
Senior Nursing Sister after five years in grade.. ..	350 ,,
Senior Nursing Sister on promotion	325 ,,
Nursing Sister after 11 years in service	300 ,,
Nursing Sister after 5 years in service	275 ,,
Nursing Sister on appointment	250 ,,

Royal Indian Marine.

All first appointments of executive officers in the Royal Indian Marine are made by the Secretary of State for India

The limits of age for appointment to the junior executive rank, that of Sub-Lieutenant, are 17 and 22 years, and no candidate will be appointed who does not possess the full ordinary Board of Trade certificate of a Second Mate; certificates for foreign-going *steamships* will not be accepted.

PAY AND ALLOWANCES.

The present establishment of officers of the Royal Indian Marine and their allowances are as follows:—

	Grade pay.	Per mensem Rs.
33	Nine Captains ..	900
	Eleven Commanders ..	800
	The remainder (13) ..	700
72	Lieutenants of 14 years' seniority (Lieut.-Commanders of 6 years' seniority) ..	625
	Lieutenants of 12 years' seniority (Lieut.-Commanders of 4 years' seniority) ..	600
	Lieutenants of 10 years' seniority (Lieut.-Commanders of 2 years' seniority) ..	575
	Lieutenants of 8 years' seniority (Lieut.-Commanders)	550
	Lieutenants of 6 years' seniority	450
	Lieutenants of 4 years' seniority	400
	Lieutenants under 4 years' seniority	300
	Sub-Lieutenants	250
	Cadets (without certificate) .	200

Total 105

In addition, 3 Commanders and 7 Lieutenants are at present employed in the Marine Survey of India.

A certain number of Shore, Port, and Marine Survey appointments are usually reserved for officers of the Royal Indian Marine. The numbers so reserved and the allowances attached (in addition to pay of grade), are as follows:—

	Allowances per mensem. Rs.
4 Shore appointments ..	400—1,000
16 Port appointments	320— 870 per diem.
11 Marine Survey appointments	4—20

The sanctioned establishment of the Engineers' branch of the Marine numbers 82, of whom at present two are Engineer Captains, Eight Engineer Commanders and the remainder Engineer Lieutenant Commanders, Engineer Lieutenants and Engineer Sub-Lieutenants.

The Indian Civil Service.

In the early years of the eighteenth century the East India Company was still little more than a body of traders. The genesis of the Indian Civil Service is to be sought in the modifications which the Company underwent as it found itself year by year more involved in the government of the country with which it was trading. It was gradually realised that neither the pay nor the training of the Writers, Factors and Merchants of the Company was adequate to the administrative work which they were called on to perform. As a result this work was often indifferently done, and corruption was rife. To Lord Cornwallis is due the credit of having reorganized the administrative branch of the Company's service, in accordance with **three main principles** from which there has been hitherto no deviation. These were that every civil servant should covenant neither to engage in trade nor to receive presents, that the Company on their side should provide salaries sufficiently handsome to remove the temptation to supplement them by illegitimate means, and that, in order that the best men might be attracted the principal administrative posts under the Council should be reserved for members of the Covenanted Civil Service as it was called. The first of these principles is embodied not only in the covenant which every member of the service still has to sign on appointment, but also in the "Government Servants' Conduct Rules," which are applicable to every civil department, however recruited. As regards the second, the scale of salaries originally prescribed was so handsome that it has not yet been considered expedient to undertake any general revision of it. The list of reserved posts remains, too much the same as in 1793, though certain modifications have been introduced to meet Indian aspirations.

At first nominations to the service were made by the Directors, but this right was withdrawn by Act of Parliament in 1853, and since 1855 **appointments** have been open to public competition, all natural-born subjects of the Crown being eligible. The age-limits and other conditions of examination have varied considerably from time to time, but at present candidates are examined between the ages of 22 and 24. At first young officers were sent straight to their appointments on recruitment, but in 1800 Lord Wellesley established a college at Fort William for their preliminary training. This was not a success and in 1805 a college at Haileybury was substituted, and for 53 years nominees underwent a two years' training there before proceeding to India. At present a year's course at a British University is prescribed, and at the close of this year there is a further examination. Failure to pass this means final loss of appointment, and seniority in the service is determined by combining the result of the open competition and this final compulsory examination.

The Statute of 1793 (33 Geo. cap. 52) modified in 1861, sets forth the list of **offices reserved** for members of the Indian Civil Service. It includes among others the offices of secretaries and under-secretaries to governments, commissioners of revenue, Civil and Sessions Judges, Magistrates and Collectors* of Districts (in the regulation provinces) and joint and assistant Magistrates and Collectors. In the non-regulation provinces, many of the above posts are held by military officers. In addition to these reserved posts there are many other appointments which the Indian Civilian can hold. He is now, however, debarred from permanent appointment as Governor-General or Governor, the highest office he can attain being those of Lieutenant-Governor and Member of the Viceroy's Council.

Despite the complete eligibility of **natives of India**, and despite the numbers of Indians who now seek their education in England, comparatively few have succeeded in obtaining appointments by open competition. On the 1st of April 1913 only 46 of the 1,319 civilians on the cadre were natives of India. In 1870 an important Act (33 Vict. cap. 33) was added to the statute book which allowed the appointment of "natives of India of proved merit and ability" to any of the offices reserved by law to members of the Covenanted Civil Service, such officers were known as Statutory or Uncovenanted Civilians. This method of appointment was dropped in 1889, and facilities were afforded to Indians for promotion through the ranks of the Provincial Service.

The young civilian, on joining his appointment in India, is attached to a district as **assistant to the Collector.** He is given limited magisterial powers, and after passing examinations in the vernacular and in departmental matters he attains to full magisterial powers and holds charge of a revenue subdivision. During this period he is liable to be selected for the judicial branch and become an Assistant Judge. In course of time promotion occurs and he becomes either Collector and District Magistrate, or District and Sessions Judge: this promotion does not generally occur before he has served for at least ten years. The District Judge is the principal civil tribunal of the district and wields extensive appellate powers. In his capacity as Sessions Judge he tries the more important criminal cases of the district.

The **Collector** is not merely chief magistrate and revenue officer of his district. He also forms a court of appeal from subordinate magistrates, supervises municipalities and local boards, is chief excise officer and district registrar, and in general represents Government in the eyes of the people. The Collector and his assistants are expected to travel over their

* The Chief Revenue Officer of a District is known as the Collector in the "regulation provinces" of Bengal, Madras, Bombay, Agra and Behar and Orissa. Elsewhere he is the Deputy Commissioner, and his assistants are Assistant Commissioners.

charges; touring rules vary in different provinces, but in Bombay the Collector spends four and his assistants seven months in the year on tour.

By the time the highest grades in the offices of Collector or Judge are reached the Civilian has, as a rule, nearly completed the 25 years which are necessary before he can retire. Should he elect to continue in service, there are still posts to which he can look forward for promotion. On the one hand, he may become a Commissioner or even a Member of Council, and on the other, there are Judicial Commissionerships and seats on High Court Benches. Such is the normal career of a Civilian, but this, by no means, completes the account of his prospects, for nearly one-fourth of the service is, as a rule, employed in posts—some reserved and some not—out of the regular line. A number of Civilians are employed in the Imperial and Provincial Secretariats, some are in political employ in the Native States, others hold responsible positions in the Customs, Police, Salt, Post Office and other departments, or supervise big municipalities and public trusts.

The Civilian may retire after 25 years' service and in the ordinary way must retire on reaching the age of 55. He contributes throughout his service to a pension which is fixed, regardless of whether he has risen to be a Lieutenant-Governor, or has remained at the foot of the ladder. Every Civilian, moreover, married or single, subscribes to an annuity fund which provides for the widows and orphans of deceased members of the service.

Public Services Commission.

In July, 1912, it was announced that the King had been pleased to approve the appointment of a Royal Commission to examine and report upon the Public Services in India. The Royal Commission was constituted as follows:—

Chairman.—The Right Hon. Lord Islington, K.C.M.G.

The Earl of Ronaldshay, M.P.

Sir Murray Hammick, K.C.S.I., C.I.E., Indian Civil Service.

Sir Theodore Morison, K.C.I.E., Member of the Council of India.

Sir Valentine Chirol.

Frank George Sly, Esq., C.S.I., Indian Civil Service.

Mahadev Bhaskar Chaubal, Esq., C.S.I., Member of the Governor of Bombay's Executive Council.

Gopal Krishna Gokhale, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Walter Culley Madge, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Abdur Rahim, Esq., Judge of the Madras High Court.

James Ramsay MacDonald, Esq., M.P.

Herbert Albert Laurens Fisher, Esq., Fellow and Tutor of New College, Oxford.

The Terms of Reference were as follows:—

To examine and report upon the following matters in connexion with the Indian Civil Service, and other civil services, Imperial and Provincial:—

(1) The methods of recruitment and the systems of training and probation;

(2) The conditions of service, salary, leave and pension.

(3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient.

Work of the Commission.—The Royal Commission visited India in the cold weather of 1912-13, and toured extensively in India, including Burma, confining their attention mostly to hearing the evidence of and relating to the Indian Civil Service. They subsequently sat in London and in October, 1913, again left for India to enquire into 28 Services other than the Indian Civil and the Provincial Services. They assembled first at Delhi on November 3rd, and examined Imperial officers and witnesses from the United Provinces, the Punjab and the North-West Frontier Province. They then assembled at Calcutta in the middle of December, to hear witnesses from Bengal, Bihar and Orissa, and Burma.

Early in February the Royal Commission went to Madras, and completed the tour at Bombay, where witnesses from Western India and the Central Provinces were heard.

The Commission returned to England in the spring of 1914, and drew up a report of which publication was delayed on account of the war, until January, 1917. This report is a large blue book of 529 pages. The actual report of the Commissioners, with their recommendations, runs to 65 pages, but the annexures covering the various departments occupy 300 pages. Special minutes relating to the report by members who sign it take up 22 pages while a long minute, which really constitutes a separate report, by Mr. Abdur Rahim, of the Madras High Court, who regrets he has been unable to agree in the tenor of report or accept the more important of the conclusions of the commissioners, runs to no fewer than 94 pages.

Conclusions.—The Commission at the end of their report thus sum up their conclusions:—

At the end of the various annexures to our report we have summarised in detail the recommendations which we have made with regard to each service. The proposals we have put forward for increased expenditure have been framed without regard to the prior claims of the present war on the resources of the country, and may need to be given effect to gradually. Otherwise we have taken into account the existing situation. The main conclusions to which we have come are as follows:—

(i) Where it is necessary to organise the public services into higher and lower branches

this should be arranged on the basis of the work which they are required to do, and not, as is now in some instances the case, of the race of, or the salaries drawn by, their members, or any such artificial distinction (paragraphs 24 to 26).

(*ii*) Officers promoted from a lower into a higher service should ordinarily be given the same opportunities as officers who have been directly recruited and should be eligible on their merits for appointment to any post in their service. Both classes of officers should be shown on the same list and should take seniority amongst themselves from their date of entry on the list. Except in the case of the Indian civil service all promoted officers should also be made full members of the service into which they are promoted (paragraph 27).

(*iii*) The practice of employing military officers on civil duties should be continued in the medical, public works, railway, and survey of India departments, and subject to the conditions stated Military officers should also be eligible for appointment to the mint department. Elsewhere the practice of recruiting them should be allowed to die out, but this should take place gradually in the case of the civil service in Burma (paragraph 28).

(*iv*) The practice of employing members of the Indian civil service in other departments should be continued in the post office, and in the Northern India salt revenue, Indian finance and customs departments. Such officers should also continue to supervise the work of the land records (Burma), registration, salt and excise, and survey (Madras) departments. They should no longer be appointed directors of agriculture but rural commissionerships should be created and be manned from their ranks. The Inspector-generalships of police should no more be recruited for in the Indian civil service, but Indian civil servants, should continue to be eligible for these appointments subject to the claims of qualified police officers (paragraph 29).

(*v*) The services which lie between the higher and the subordinate services should no longer be designated "provincial" Services. If they are organised provincially they should ordinarily bear the name of their province; for example, the Madras civil service, the Bombay police service, and so on. If they are under the Government of India the terms class I and class II should be used for the two services. These terms should also be used in the education department (paragraph 30).

(*vi*) The services for which recruitment is now made normally in India should continue to be recruited for in that country. The Indian finance department should be added to this category. The military finance department should be similarly treated, if there are no military considerations to the contrary. Eventually, similar action should be taken with the customs department, but for the present some recruitment in Europe for this department should be permitted. The remaining services for which recruitment is now made wholly in Europe, or partly in Europe and partly in India, should be divided into three main groups. In the first should be placed the Indian civil service and the police department, in which it should be recognised that a preponderating proportion of the officers should be recruited in Europe. In the second should come services like the education, medical, public works and so on, in which there are grounds of policy for continuing to have in the personnel an admixture of both western and eastern elements. For these services arrangements should be made for recruitment in both countries. In the third should be placed certain scientific and technical services, such as the agricultural and civil veterinary departments, etc., for the normal requirements of which it should be the aim to recruit eventually in India. To this end educational institutions should be developed in India on a level with those now existing in Europe so as to produce the necessary supply of candidates (paragraphs 31 and 32).

(*vii*) No system of state scholarships will provide a suitable method for increasing the number of non-Europeans in the public services (paragraph 35).

(*viii*) In certain services arrangements should be made for the appointment of a minimum number of Indians, but this should not be made a general practice for fear that the minimum may come to be regarded as a maximum (paragraph 35).

(*ix*) To secure an increase in the number of non-Europeans employed, so far as this is not obtained automatically by the proposals made with regard to organization and the place of appointment, different methods should be followed in different services, as detailed in the annexures. Speaking generally, technical institutions in India should be created or expanded; provision should be made for advertising vacancies; Indian members should be appointed to serve on the committees which will advise on the selection of recruits; and, finally, the statistics relating to the employment of members of the various communities should be published every ten years (paragraph 36).

(*x*) The question of the extent to which the services should be manned by the direct recruitment of untried officers and by the promotion of experienced officers from an inferior service should be settled separately for each service, as explained in the various annexures. But in every case opportunities should be created for young men, and direct recruitment should be encouraged wherever possible (paragraph 37).

(*xi*) In the present conditions of India no general system of competitive examinations as a means of entry to the public services is suitable, but where such a method exists it should ordinarily be maintained (paragraph 42).

(*xii*) When nominating direct recruits for admission to the services the authorities in India should act with the advice of committees which should not be purely departmental in character, but should contain persons in touch with educational institutions, and should also have a non-official and an Indian element. Publicity should be given to all vacancies, and applicants should be forbidden to bring outside pressure to bear on individual members of the committees. A similar procedure should be followed in England. Candidates for services recruited in India should ordinarily possess minimum educational qualification. This need not be identical for all candidates, but the standard for all should be the same (paragraph 44).

(*xiii*) In recruiting specialists care should be taken to draw upon the widest possible field (paragraph 45).

(*xiv*) Arrangements can best be made for communal representation in India by the exercise of the powers of Government under the system of nomination proposed. No hard and fast rule or proportion is suitable (paragraph 46).

(*xv*) Except where otherwise provided, direct recruits should be on probation for two years. A probationary course in England should be given only to recruits for the Indian civil and forest services, and in the latter only for so long as recruits are taken from Europe. As the schools of forestry of the United Kingdom are developed, recruits from Europe should be taken from them (paragraph 47).

(*xvi*) The question of training requires to be considered for each service separately, as explained in the various annexures. Inter-provincial conferences of officers responsible for the training of recruits should be encouraged (paragraph 48).

(*xvii*) In fixing the salaries of their employes, Government should pay so much and so much only as is necessary to obtain recruits of the right stamp, and to maintain them in such a degree of comfort and dignity as will shield them from temptation and keep them efficient for the term of their service (paragraph 49).

(*xviii*) Except where otherwise expressly provided, officers should be remunerated by an incremental scale of salaries on the compartment system. Where this is done the rules with regard to acting allowances should be revised (paragraphs 50 and 51).

(*xix*) Exchange compensation allowance should no longer be paid, but generally speaking the amounts now drawn on this account should be added to the salaries of officers (paragraph 52).

(*xx*) The salaries to be paid to Europeans and statutory natives of India respectively should be settled for each service separately and ordinarily in accordance with the principle set out in item xvii above, and not on any general consideration of race or place of recruitment. In services in which different rates are found to be suitable they should be fixed on the merits of each case, and no proportion should be laid down generally as between the amounts payable to the two classes of officers. In services the normal requirements of which will eventually be met in India, the standard scale of salaries should be that considered suitable for statutory natives of India, and special rates should be fixed for Europeans for so long as they are recruited. In certain services in which equality of pay has long been an established practice this should be maintained. In other services officers should be brought to an equality in the administrative ranks, and earlier in the education department. As a special case statutory natives of India recruited in Europe should be paid as Europeans (paragraphs 53 to 57).

(*xxi*) The salaries to be paid to officers should be as stated in the various annexures. For recruits in India from the ordinary graduate class, or their equivalent amongst members of the domiciled community, a general scale rising from Rs. 250 to Rs. 500 a month should be introduced. Beyond this there should be selection scales of posts suitable to the circumstance of each service. For services requiring higher initial qualifications higher rates should be adopted (paragraph 58).

(*xxii*) The necessary steps should be taken to keep the cadres of the services up to a strength sufficient to cope with the work to be done (paragraph 61).

(*xxiii*) The calculations in accordance with which recruitment is made should be worked out with greater precision, and should be revised periodically with due regard to the requirements of leave and training. More precision is needed in fixing the annual rate of recruitment, and service tables should be prepared and kept up to date for each service or group of services. Distribution lists should be maintained for all services, which are recruited on a system, to show by groups of years the theoretical and actual number of officers present. Excesses or defects should be dealt with at the point where they occur. If in spite of these measures blocks in promotion are experienced, special allowances should be given on the merits of each case (paragraphs 61 to 65).

(*xxiv*) An expert committee should be appointed to simplify the present travelling allowance rules, to consider their sufficiency for everyday purposes, and to revise the classification of officers. Immediate measures should be taken to reimburse officers for all reasonable charges incurred by them on transfer from one station to another, whether personal to themselves or on behalf of their families and household establishments (paragraphs 66 to 68).

(*xxv*) The rules as to house allowance should be revised on the lines indicated (paragraph 69).

(*xxvi*) A Burma allowance should be given on the terms stated (paragraph 70).

(*xxvii*) Free passages should be given to officers of the services specified (paragraph 71).

(*xxviii*) Inefficient officer should be compulsorily retired (paragraph 72).

(*xxix*) Officers who are subject to the operation of article 459 of the civil service regulations should be retired at the age of 55, unless Government, in their sole discretion, decide to grant an extension of service (paragraph 73).

(*xxx*) There should be separate European service and Indian service leave rules to regulate the taking of long leave. Speaking generally, officers recruited under European conditions of salary should be subject to the European, and others to the Indian service leave rules (paragraphs 77 and 78).

(*xxxi*) The European service leave rules should be simplified, and greater facilities for leave on higher pay should be given by allowing privilege leave to be accumulated up to four months and furlough to be commuted subject to the restrictions stated (paragraphs 79 and 80).

(*xxxii*) The sterling amounts of the allowances payable under the European service

leave rules should stand to the rupee amounts in the proportion of 18 to 16 (paragraph 81).

(*xxxiii*) The Indian service leave rules should be simplified; officers subject to them should be allowed to accumulate privilege leave up to four months, and the allowances permissible should be increased to the extent stated (paragraphs 82 and 83).

(*xxxiv*) The rules relating to study leave should be revised; the arrangements for deputing officers to study particular problems should be made more elastic, and facilities should be given to officers on leave to study voluntarily such problems as interest them (paragraphs 84 to 86).

(*xxxv*) With the exceptions specified all officers should be under the same pension rules; all should serve normally for thirty years, but those recruited after the age of twenty-five in the services noted should be granted the concessions indicated, and all should be able to retire optionally on a reduced pension after twenty-five years' service. Government should be able to retire any officer after this period (paragraphs 87 to 91).

(*xxxvi*) The maximum limits of pension should be increased on the conditions stated and special additional pensions of amount stated should be drawn by the officers noted (paragraphs 92 and 93).

(*xxxvii*) A scheme for a general family pension fund, or for separate funds for different classes of officers, should be worked out on a self-supporting basis (paragraph 96).

REVISED METHOD OF RECRUITMENT.

Orders were issued from time to time regarding the recommendations of the Public Services Commissions, the last being one dated in December 1920, when decisions were taken regarding the organisation and recruitment of the service which are as follows:—The organisation which has been decided on, as recommended by the Public Services Commission to maintain the existing organisation of the Civil Services, and its division into imperial service and a provincial service, is based on the work for the performance of which the two services are recruited and not on any artificial distinction The evidence recorded by the Commission disclosed no desire for any change. In future the Imperial branch will be known as the Indian Civil Service and the Provinical will bear the name of the province in which its members are serving.

The recruitment of military officers to fill Civil Service posts in Burma will cease from the date of the present resolution. A revised list of superior appointments is annexed to the resolution, it has been approved by the Secretary of State but it has been compiled primarily for recruitment purposes and does not purport to be final in any way.

Recruitments for the Indian Civil Service (including appointments to the posts ordinarily held by members of the Indian Civil Service) will in future be affected by five methods: (1) Open competitive examination in London; (2) separate competitive examination in India; (3) nomination in India; (4) promotion from the Provincial Civil Service; and (5) appointment from the Bar.

The open competitive examination in London will be the main channel of entry to the service and will be open to all as heretofore, subject to the reservation that in future Indians successful in this examination will not be allotted to Burma, nor successful Burmans to India. The exact conditions of the future examinations cannot at present be announced as the details of the syllabus are still under consideration, but the Secretary of State has been in consultation with the Civil Service Commissioners and with the Universities in the United Kingdom with regard to the age of entry and the period of probation and has arrived at the conclusion that it is the best interests of India that the age limits for admission to the examination shall be 21 to 23 (reckoned from 1st August in the year in which the examination is held) and that the period of probation shall be two years. Before arriving at this decision, the Secretary of State in Council carefully considered other possible alternatives and in particular: (*a*) the proposal of the Royal Commission on the Public Services in India that the age-limits should be 17 to 19, on the 1st January followed by three years' probation; and (*b*) a proposal that the age-limits should be 17 to 20 followed by two years' probation.

The reasons for and against the various alternatives are distinctly stated in the extract from the report of the Civil Service Commissioners. In deciding on the adoption of the age-limits of 21 to 23, followed by two years' probation, the Secretary of State in Council has been influenced by the facts: (1) that it is the solution which was favoured by the Government of India in referring the question for the consideration of local Government in January 1919, and by a majority of the local Governments in reply to that reference; (2) that it is recommended by the Civil Service Commissioners, who are his statutory advisers in such matters; and (3) that the Universities in the United Kingdom are practically unanimous in favour of it, moreover public opinion in India is decidedly against the adoption of the school leaving age limits, which would in practice exclude many Indians from the open competition in England; and in favour of the higher limits, as was evident from the discussion in the Imperial Legislative Council on 24th September 1917, on a resolution deprecating acceptance of the Royal Commissioners' proposal.

The decisive consideration is the paramount necessity of securing for the Indian Civil Service officers of the highest possible quality. For this it is necessary to obtain men who have completed their University education and have had in addition a thorough special training such as a well organised course of probation lasting for two years will afford. The details of the course of probation are now under consideration by the Civil Service Commissioners but it has been decided that law and jurisprudence shall form an important part of the training. The study of the Indian languages, vernacular and classical, of Indian history and of economies, with

special reference to Indian conditions, will also be included in the course. The details both of the probationary course and of the syllabus of the open competition, will be announced later when they have been finally settled.

A separate competitive examination in India has been accepted as the **main source of Indian recruitment**. The institution of such an examination is provided for by Section 97 of the Government of India Act. The conditions under which the examination will be held were announced in 1921 and it was arranged that the first Examinations would be held in 1922. The candidates thus selected as well as any who may be nominated in India under paragraph 8 of this resolution, will be sent to the United Kingdom to join the candidates selected at the open competition in London in their two years course of probation. It has been decided that of the recruits selected in India for the service, exclusive of those promoted from the provincial service or directly appointed from the bar, at least 67 per cent. will be obtained through this examination.

Nomination is provided for in Section 97 (6) of the Government of India Act in order to secure to some extent, representation of the various provinces and communities in India It will not of necessity take every year, but only when the results of the competitive examination in India fails to give the representation required. The following procedure will be adopted:—When the number of vacancies to be filled in India in any year, by direct recruitment, exclusive of promotions from the provincial service and appointments from the bar, has been settled 67 per cent. of these will be announced as open for competition. If the distribution of success in the examination turns out to be such as will meet the requirements of the various provinces and communities resort to nomination will be unnecessary. The vacancies held in reserve will be filled as far as possible by selection from among the candidates who sat for the competitive examination and attained a certain qualifying standard. Failing this they will be filled by nomination. Rules relating to nomination are being framed, under Section 97 (*b*) of the Government of India Act and will be announced as early as possible.

Promotion from the provincial service.—The Commission recommended some reduction in the number of listed posts, but the Government of India have decided not to reduce the chances of promotion open to officers of the Provincial Service until they are in a position to appreciate more accurately, than is possible at present, the effect of the rules now framed. Regarding direct recruitment to the Indian Civil Service in India it is probable indeed that in some provinces the number of such appointments will actually be increased. Officers promoted from the ProvincialCivil Service to hold posts ordinarily held by members of the Indian Civil Service will in future, have the same opportunities of promotion as those who have been directly recruited. In regard to their status, *vis-a-vis* the regular members of the Indian Civil Service, the Government of India have decided to institute, or where they exist, to retain the provincial commissions on the lines recommended by the Public Services Commission in paragraph 3 of annexture X. of their report and to include in such commissions not only all members of the Indian Civil Service, however selected, but also promoted members of the Provincial Civil Service and members of the bar appointed to hold superior appointments, ordinarily held by members of the Indian Civil Service. The two latter classes of officers cannot be admitted to the Civil Service itself but will, from the date of their appointment, take rank with the Civil Service officers and will be eligible with them, on their merits, for all posts on the Civil Service cadre appointments.

The Bar.—The local Governments already have power under the rules laid down in the Home Department notification No. 598, dated the 21st June, 1918, to appoint persons who are not members of the Provincial Service, up to one-fourth of the total number of listed appointments, this power will be utilised by them as an experimental measure to appoint district judges direct from the Bar. It is hoped ultimately to fill not less than 40 posts in this way should the qualified men be available. Members of the Bar will, however, be appointed to posts in excess of 25 per cent. of the total number of such appointments only as new posts are created and with due regard to the claims of existing members of the Civil Services, thus the rights of these officers will be duly safeguarded as was expressly provided for by Section 36 (2), of the Government of India Act, 1919. At the same time, there will be no reduction in the number of posts open to men promoted from the Provincial Civil Services. Should the experiment prove successful (and on this point the opinion of High Courts will be ascertained from time to time) the full number, *i.e.*, 40 will eventually be made available for persons from the Bar for the purposes of these appointments. The Vakils and Advocates of High Courts and pleaders of Chief Courts will be eligible as well as barristers.

Percentage of Indians in the service.—After full consideration with the approval of the Secretary of State, the Government of India have decided to adopt the proportion suggested in paragraph 317 of the Joint Report on Indian Constitutional Reforms. This proportion of 33 per cent., rising by 1½ per cent., annually for ten years to a maximum of 48 per cent., will be taken as an all round figure to cover the total Indian recruitment from all sources, including promotion from the Provincial Service and appointment from the Bar.

The number of Indians to be recruited in India by examination and nominations will be fixed each year, after taking into account the number of Indians recruited in other ways, including the open competitions in London. The direct recruitment of Indians for 1920, has already been partially given effect to by the nominations already made under the rules issued under the Indian Civil Service (temporary provisions) Act and the candidates selected are already undergoing their probation in England. Although the candidates under these rules were selected at the end of 1919, the calculation of the number to be appointed was based on a consideration of vacancies that had accumulated from 1915 to 1920, inclusive.

These candidates were selected by nomination. It was intended that any further appointment to be made in India should so far as possible be effected by means of a competitive examination as explained in paragraph 7 above, but the Civil Service Commissioners, who are engaged in working out the scheme for this examination, have reported that it will not be possible to hold the examination in 1921 in time for candidates selected to commence their probation in England in October 1921. It has been decided, therefore, in that the number of Indians required to be recruited for 1921, according to the percentages approved above, should be obtained by nomination as in 1919. The rules required to effect this are under consideration, and will be published as soon as possible. It is hoped that the scheme of the examination in India will have been settled and rules under Section 97 (6), referred to in paragraph 8 above, approved in time to enable the first competition in India to be held in the cold weather of 1921-22 and the candidates selected to commence their probation in England in October 1922.

Training in India.—Subject to the general considerations mentioned below full discretion is left to the local Governments and administration in the matter of framing rules for departmental examinations and training on arrival in India. Officers should be trained under the supervision of a suitable district officer, with special qualities required for training junior officers but also having the time to devote to this object. Much valuable assistance can often be given him in this matter by a senior assistant.

For the first years too much court work should not be prescribed and departmental examination should be more practical. The test of proficiency in law should be more and more limited to an examination of a man's ability, with the act and rules at his disposal, readily to find the law governing a particular case and to apply it intelligently. The test in the vernaculars should be stiffened and should be directed chiefly to ensuring that officers are able to converse in them with fluency and to read and write them with accuracy.

Special training of officers for the JUDICIAL BRANCH.—Officers may be definitely selected for the judicial branch at any stage between five and eight years' service. As soon as they are so selected they should undergo a period of training for 18 months in the posts of munsif and subordinate judge, or additional district judge, and thereafter, if the High Court so recommends, they may be granted study leave to the United Kingdom for the purpose of reading in Barristers' Chambers and passing the Bar examinations, under such rules as may from time to time be prescribed by the Government. Ordinarily this leave will not be granted to any officer after the twelfth year of service.

REVISED RATES OF PAY.

In January 1920 it was announced that sanction had been given to revised rates of pay for officers of the Indian Civil Service holding executive posts with effect from the 1st December 1919. From that date onward there will be two scales of pay, a senior and a junior scale. Officers will draw pay in the senior or the junior scale according as they are holding superior appointments or not. The scale will be as follows:—

	Year of service.	Inferior scale per mensem.	Superior scale per mensem.	For Madras Collectors only.
		Rs.	Rs.	Rs.
Or any earlier year	1st	450	.....	.....
	2nd	500	.....	.....
	3rd	550	.....	.....
	4th	600	.....	.....
	5th	650	1,000	.....
	6th	700	1,050	.....
	7th	750	1,100	.....
	8th	800	1,150	.....
	9th	900	1,200	.....
	10th	1,000	1,275	.....
	11th	1,100	1,350	.....
Efficiency Bar	12th	1,200	1,425	.....
	13th	1,300	1,500	.....
	14th	1,300	1,600	.....
	15th	1,350	1,700	.....
	16th	.....	1,800	.....
	17th	.....	1,900	.....
	18th	.....	2,000	.....
	19th	.....	2,050	.....
	20th	.....	2,100	2,150
	21st	.....	2,150	2,200
	22nd	.....	2,200	2,350
	23rd	.....	2,250	2,400
	24th	.....	2,250	2,500
	25th	.....	2,250	2,500

Overseas Allowances—Note 1. Every officer drawing pay on the time scale will also receive, if he be of non-Indian domicile, an overseas allowance as follows:—Rs. 150 from the 1st to 7th year of service inclusive, Rs. 200 from the 8th to 11th years inclusive, Rs. 250 from the 12th year to the end of the time scale Beyond the time scale overseas allownace will cease and the pay sanctioned will be the same for all incumbents.

As an exception to this general rule, all Indians now in the Indian Civil Service and those appointed as the result of the next five open competitions in the United Kingdom will be regarded as eligible for the overseas allowance.

The term 'emoluments' is used hereinafter to express pay plus overseas allowance.

Note 2. Officers will become eligible for the increments of Rs. 50 shown in the 2nd and 3rd years of the time scale on passing the first and second departmental examinations respectively, and will remain on Rs. 700 (or Rs 550 if not eligible for the overseas allowance) till the completion of their 3rd year.

Note 3. The above time scales will cover appointments now graded as Assistant Commissioners, Assistant Collectors and Joint Magistrate or Sub-Collectors, all of which, with the exception named in paragraph 3 below, will be classed as inferior, and Deputy Commissioners or Magistrate Collectors, and District and Sessions Judges or Divisional Judges, Additional Magistrates and Additional Judges and such appointments as are graded with Magistrates and Collectors or Deputy Commissioners and District and Sessions Judges which will be classed as superior.

2. Except as provided below, all officers on the general time scale holding superior judicial appointments, will draw a duty allowance of Rs. 150 a month in addition to their emoluments under that scale. Judicial Officers serving in the Madras Presidency will draw this allowance in addition to the emoluments permissible under the general time scale and not in addition to admissible those under the scale sanctioned for Madras Collectors.

JUDGES' AND COMMISSIONERS' PAY.

The following numbers of District and Sessions Judges will draw pay outside the time scale of Rs. 3,000 a month: -Madras, 2; Bombay, 1; Bengal, 3; United Provinces, 2; Punjab 2; Burma, 1; Bihar and Orissa, 2.

2. They will not draw the overseas allowance or the judicial allowance of Rs. 150.

3. First grade Sub-Collectors in Madras will draw emoluments in accordance with the superior time scale, subject to a maximum of Rs. 2,000.

4. The pay of first grade Commissioners in Bombay will remain unchanged. The pay of the Municipal Commissioner in Bombay will continue to be regulated as at present. All other Commissioners except the Commissioner of Kumaon will in future draw Rs. 3,000. No change has been made in the pay of Financial Commissioners and Members of the Boards of Revenue.

5. The Chief Secretaries to the Governments of Madras and Bombay and Bengal will continue to draw their existing pay. The Chief Secretaries to the Governments of the United Provinces, the Punjab, Burma, Bihar and Orissa and the Central Provinces will receive Commissioner's pay. The Chief Secretary to the Chief Commissioner, Assam, will be paid on the superior time scale plus a duty allowance of Rs 400.

6. Proposals relating to the pay of special appointments (other than those dealt with above) and the pay to be drawn by officers promoted from the Provincial Civil Service and recruited from the Bar have recently been submitted to the Secretary of State.

7. In bringing officers at present in service on to the revised rates of pay, Articles 156 to 158 of the Civil Service Regulations will not be held to apply. Existing incumbents of officers will be protected against any immediate loss of pay due to the introduction of the revised rates.

8. Exchange compensation allowance is withdrawn with effect from the 1st December 1919.

THE INDIAN MEDICAL SERVICE.

The Medical Service under the control of the Government of India consists of some 803 medical men recruited in England by competitive examination; and has as its primary duty the care of the native troops and of the British officers and their families, attached to them. But in the course of rather more than a century and a half other duties and responsibilities have accrued to it, so that there are in addition the provision of medical aid to Civil Servants and their families, the administration of the civil hospitals of the large towns, and

the supervision of the numerous small dispensaries provided either by the Government or private charity for the inhabitants of the larger villages. Moreover, the Service provides for the sanitary control of large areas, dealing with the sanitation of towns, protection of water supplies and the prevention of epidemic disease. It is also represented in the Native States by the Residency Surgeon, and in Persia by the Medical Officers to the British Consulates. The Jail Department is also administered in great part by Indian Medical Officers, generally in the dual capacity of Medical Officer and Superintendent; and up to quite recently the Officers in the Mints have been recruited from members of the medical profession. Lastly, the Service provides the men who are engaged in original research on diseases of tropical importance at the Bacteriological Laboratories which have arisen in India during the last fifteen years, and others who as Professors at the large medical schools have had the task of creating an indigenous medical profession which will make permanent throughout the Indian Empire the civilising influence of Western Medicine.

This remarkable combination of duties and responsibilities in a single Service has slowly evolved from the system, initiated in quite early days by the old East India Company, of providing "Chirurgeons" from England, on the nomination of the Board of Directors in London, for the care of the people and soldiers in the Indian "Factories," and on the ships trading with the East. Besides these men the Company maintained several medical services, including those of St. Helena, the West Coast of Sumatra, Prince of Wales Island, and the China Coast. The Surgeons on the Company's Indiamen were frequently utilised for emergent work in India, as in the case of the Mahratta War of 1780 and other military operations of that time, for duty with troops, and sometimes to fill vacancies occurring among those who would now be styled "civil surgeons."

Organisation.—The Indian Medical Service practically dates from the year 1764 when the scattered medical officers serving in India were united into one body: later, this was divided into the three medical "Establishments" of Bengal, Madras, and Bombay. In 1766, the Medical Service was divided into two branches, military and civil, the latter being regarded as primarily army medical officers, lent temporarily for civil duties, in which they formed a reserve for the Indian Army, and were consequently liable to recall at any time. This position was confirmed by the Council of Lord Cornwallis in 1788; and has been in existence ever since with great advantage to the military authorities in times of military stress. In 1898, the officers of the Service were given military rank, and since 1906 all the names have been borne on one list, though men on entering the service are allowed to elect a Presidency in which they will serve on entering the Civil Department.

The Service was thrown **open to Indians** by the India Act of 1853, the first competitive examination being held in January 1855, when the list was headed by a Bengalee student who subsequently attained distinction. It was calculated by Lt.-Col. Crawford, I.M.S., (the talented historian of the Service) that from January 1855 to the end of 1910, eighty-nine men of pure Indian extraction had entered the Service. The proportion now shows signs of yearly increase. The total number of Indians at present in the Service is a little more than five per cent. of the whole: while, of the successful candidates during the past five years, 17·6 per cent. have been men born and bred in the country.

Method of Entry.—Entrance into the Service before 1914 was determined on the results of competitive examinations held twice a year in London, the Regulations regarding which, and the rates of pay, rules for promotion and pension relating thereto, may be obtained on application to the Military Secretary at the India Office. Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, of sound bodily health, and, in the opinion of the Secretary of State for India in Council, in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a qualification registrable in Great Britain and Ireland. No candidate will be permitted to compete more than three times. Candidates for the January examination in each year must be between 21 and 28 years of age on the 1st February in that year, and candidates for the July examination must be between 21 and 28 years of age on the 1st August.

The candidate is examined by the Examining Board in the following subjects, and the highest number of marks obtainable will be distributed as follows:—

(1) Medicine, including Therapeutics	1,200 Marks.
(2) Surgery, including diseases of the eye	1,200
(3) Applied Anatomy and Physiology	600
(4) Pathology and Bacteriology	900
(5) Midwifery and Diseases of Women and Children ..	600
(6) Materia Medica, Pharmacology and Toxicology..	600

N.B.—The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Having gained a place at the entrance examination, the successful candidates will be commissioned as Lieutenants on probation, and will be granted about a month's leave. They will then be required to attend two successive

courses of two months each at the Royal Army Medical College, and at Aldershot respectively.

Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the preliminary and final examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment, they will stand posted to one of the following civil areas:—(1) Madras and Burma, (2) Bombay, with Aden; (3) Upper Provinces, *i.e.*, United Provinces, Punjab and Central Provinces; (4) Lower Provinces, *i.e.*, Bengal, Bihar and Orissa and Assam.

The allocation of officers to these areas of employment will be determined upon a consideration of all the circumstances, including as far as possible the candidate's own wishes.

The whole course lasts for four months, after which the duly gazetted Lieutenants proceed to India, and prior to December 1918 were attached to Indian regiments In December 1918 Station Hospitals for Indian Troops were instituted, a much needed reform which has been under consideration for a number of years. Indian Medical service officers are now attached to these hospitals for duty, and for the first years of their service are attached to native regiments in any part of the country. The doctor is an officer of the regiment, as was the case in the old days of the Army Medical Department. Of late years it has been proposed to form the members of the Service into a corps on the lines of the British Medical Service, by forming station hospitals for native troops, thereby releasing the doctor from regimental life. This reform appears to have fallen through for the present, but is likely to be brought into operation within a very few years.

Organisation.—The Head of the Service is the Director General, who is an official of the Government of India and its adviser on medical matters. He is also concerned with questions of promotion of officers to administrative rank, and of the selection of men for admission to the civil department. Attached to his office and under his general supervision is the Sanitary Commissioner with the Government of India. In each Presidency or Province there is a local head of the civil medical service and medical adviser of the local administration, who is either a Surgeon General, or an Inspector of Civil Hospitals of the rank of Colonel. The medical service in each province consists of the Sanitary Branch and the purely professional. The former is composed of Sanitary Commissioners of Districts, who by keeping large tracts of country under observation are in a position to advise their respective governments of the existence of epidemics, and on the proper methods of dealing with them and of preventing their spread. It is, however, through the Civil Surgeon that the visitor to India will come in contact with the Service. This official is something more than a general practitioner, as he is expected to be the leading medical and surgical authority in a large district consisting of a million or more of souls. Owing to the varied experience obtained in India by the members of the Civil Medical Department, this official is generally a man of the highest professional attainments, especially so in the case of those senior men holding appointments in the larger towns. His duties are to give medical aid to the civil servants and treat families, and to administer the hospital which has been provided by Government in each headquarter town. In many cases too he will have the additional charge of the local jail, and be the Sanitary Adviser of the Municipality. Accustomed to meet the most serious emergencies of his profession, and to rely entirely on his own skill and judgment, the Civil Surgeon in India has given to the Indian Medical Service a reputation for professional efficiency which cannot be excelled by any other public medical service. Travellers in India falling sick within call of any of the larger towns can therefore rely on obtaining the highest professional skill in the shape of the ordinary Civil Surgeon of the I. M. S. During the last few years the service has not been popular amongst graduates of the Medical Schools of the United Kingdom and a variety of disturbing factors have contributed towards this unpopularity. These have now been dealt with or are under consideration, and with the increased rates of pay which have been sanctioned the grant of better concessions in the matter of study, leave and facilities for research, etc. It is hoped that the service will soon regain its former popularity, and that it will attract men of the highest attainments. The Secretary of State for India has realised the necessity for an Indian Medical Service of the highest possible efficiency and has stated that he considered the I. M. S. the pivotal service of all services in India.

A Parliamentary Paper containing correspondence between the Government of India and the Secretary of State, on the promotion of an **independent medical profession** in India and the possibility of limiting or reducing the cadre of the Indian Medical Service, was published during 1914. Writing in 1910, the Government of India said that it was impracticable to make any reduction in the number of Indian Medical Service officers employed solely on civil duties, that is to say, those not belonging to the war reserve. An independent profession trained on western lines was growing up in India but had to overcome its universal rival in the shape of *hakims* and others trained in indigenous methods: Government could do much to encourage the growth of this profession by making provision for the registration of medical practitioners qualified according to western methods. The Secretary of State, replying in November 1912, said that he was unable to contemplate any substantial reduction in the Indian Medical Service. As for the independent profession, he trusted that the experience of the working of the Bombay Registration Act might justify the introduction of similar legislation for other Provinces. He considered that the Indian Medical Service should be restricted to the military needs of the country both on account of economy and in order to increase as far as possible the number of important posts held by Indians; he was prepared to consider each new appointment on its merits, but any proposal for an

increase in the civil posts included in the cadre of the Indian Medical Service would be subjected to the closest scrutiny. In reply to that despatch, the Government of India wrote in March, 1914 :—"In view of the growing medical needs of the country which necessitate the employment of a larger staff of medical officers, some expansion of the Indian Medical Service is inevitable, and such expansion should not, in our opinion, be regarded from a different standpoint from the enlargement of any other cadre in response to the development of the work to be performed." In connexion with the growing needs of the Service the Government of India appointed a Committee to examine and report on the question of the reorganization of the Medical Services in India, both Civil and Military. The Committee were to examine the question from the standpoint that it is desirable that there should be a unified Medical Service in India. The Report of the Medical Services Committee has been submitted and the recommendations made therein for the improvement of the various branches of the services are under the consideration of Government

Pay and Allowance.—The following are the monthly rates of Indian pay (payable from the date of arrival in India) drawn by European Officers of the Indian Medical Service. Indian officers will draw pay in accordance with the basic scale set forth below, without overseas allowances :—

Rank.	Basic Pay.	Overseas Allowances for officers of Non-Indian domicile	Total Basic Pay and Overseas Allowance.
	Rs.	Rs.	Rs.
Lieutenant	500	150	650
Captain, first 3 years in rank	650	150	800
Captain, next 3 years in rank	750	200	950
Captain, next 3 years in rank or until promotion to Major	850	200	1,050
Major, first 3 years in rank	950	250	1,200
Major next 3 years in rank	1,100	250	1,350
Major, next 2 years in rank or until promotion to Lt. Colonel	1,250	250	1,500
Lieut. Colonel, first 3 years in rank	1,500	250	1,750
Lt.Col next 2 years in rank	1,600	250	1,850
Lt.-Col. next year in rank and afterwards	1,700	250	1,950
Lt.-Col, when selected for increased pay	1,850	250	2,100

Pensions and Half-Pay.—Officers are allowed to retire on pension on completing 17 years, service, the amount they receive varying with the precise number of years they have served. The lowest rate for 17 years' service is £300 per annum, and the rate for 30 years £700 per annum. The increases in pension for each additional year's service over 17 are somewhat higher in the last 5 than in the first 8 of the 13 years between the shortest and longest periods of pensionable service. All officers of the rank of lieutenant-colonel and major are placed on the retired list on attaining the age of 55 years : the greatest age to which any officer can serve being 60.

In accordance with the orders received from the Right Honourable the Secretary of State for India, sanctioning an increase in the pay of officers of the Indian Medical Service in civil employment, the pay of the various appointments concerned will, when they are held by officers of that service, be fixed at the rates shown in the accompanying statement with effect from the 1st December 1918.

2. Exchange compensation allowance, when admissible, is payable in addition to the rate referred to above.

3. The present classification of Civil and Agency Surgeons as "1st class" and " 2nd class' is abolished with effect from the 1st December 1918.

4. The object of the revision is to attract to the service European candidates with the highest professional qualifications, and the question whether Indian candidates entering permanent service after 1st December 1918, shall be eligible for these increased rates of pay, and, if so,

to what extent and under what conditions, has been reserved for further consideration. All Indian officers already in permanent service of 1st December 1918, will be eligible for the rates of pay now sanctioned.

Appointments.	Pay Consolidated.
	Rs.
Director-General, Indian Medical Service	3,500
Surgeon-General to the Government of Madras, Bombay and Bengal ..	3,000
Inspector-General of Civil Hospitals, Bihar and Orissa, Assam, United Provinces, Punjab, Central Provinces and Burma.	2,600
Deputy Director-General, Indian Medical Service	2,150
Assistant Director-General, Indian Medical Service (Sanitary).	1,700
Assistant Director-General, Indian Medical Service (Stores)	1,700
Inspector-General of Prisons, Bengal, Bombay, Madras, Burma and United Provinces.	2,100— 50— 2,300
Inspector-General of Prisons, Punjab and Bihar and Orissa	2,100
Inspector-General of Prisons, Central Provinces	1,800
Sanitary Commissioner with the Government of India	2,300—100— 2,800
Provincial Sanitary Commissioners, Bengal, Bihar and Orissa, United Provinces, Punjab, Madras, Burma and Bombay.	1,800—60— 2,100
Sanitary Commissioners, Central Provinces and Assam	1,550—50— 2,050
*Chemical Examiner's Department	950—85 — 1,800
Principal, Medical College, Calcutta	2,100
Senior Medical Officer, Port Blair	1,750
Surgeon Superintendent, Presidency General Hospital, Calcutta	2,100
Surgeon Superintendent, St. George's Hospital, Bombay	2,100
Superintendent, General Hospital, Rangoon	1,900
1st Resident Surgeon, Presidency General Hospital, Calcutta	1,200
2nd Resident Surgeon, Presidency General Hospital, Calcutta.	1,000
Resident Surgeon, St. George's Hospital, Bombay	1,000
Surgeon to His Excellency the Viceroy	1,800
Surgeons to Governors, Bombay, Madras and Bengal	1,200
Police Surgeon, Rangoon	1,250

* Present incumbents. Lieut. Colonels after 25 years' service Rs. 1,850 Lieut.-Colonels specially selected for increased pay, Rs. 2,000.

Pilot Services.

Appointments to the Bengal Pilot Service are made by the Secretary of State for India and by the Government of Bengal. In the case of appointments made by the Secretary of State, preference is given; *caeteris paribus*, to candidates who have passed through one of the training ships "Worcester" and "Conway", on the Pangbourne Nautical College.

Candidates for the Secretary of State's appointments must not be less than 18 and not more than 22 years of age. They must produce a Board of Trade or Colonial Certificate of Competency as a Second Mate, or any higher grade, for a foreign-going ship, and evidence of having served at sea not less than two years in a square-rigged sailing vessel of over 300 tons. The rates of pay and allowances of Leadsmen Apprentices while on duty are as follows, without exchange compensation allowance:—

When on the running list:—

	Rs.	
Junior Leadsmen ..	..107 a month	} Plus 50 per cent. of the lead money collected from the ships on which they do duty.
Second Mate Leadsmen	..135 a month	
First Mate Leadsmen ..	..160 a month	

When employed as Chief and Second Officer:—Chief Officers of pilot vessels, Rs. 160 a month.

As Second Officers of pilot vessels .. Rs. 135 a month

Plus a mess allowance of Rs. 40 a month

After five years' service a **Leadsman** Apprentice is allowed to appear at an examination to qualify him for appointment as **Mate Pilot**, but if he shows exceptional ability, and has passed each previous examination on his first attempt, bears a very good character, and is otherwise well reported on, this period may, with the special sanction of Government, be reduced to 4½ years. After three years' service as Mate Pilot, he is permitted to go up for an examination to qualify for appointment as **Master Pilot**, and, if successful, is promoted to that grade on the occurrence of a vacancy. Vacancies which occur in the grade of Branch Pilot are filled by promotion from the Master Pilots' grade, of men who have passed the Branch Pilots' examination. If the Local Government has reason to believe that a Pilot is, owing to physical unfitness of any kind, incapable of discharging his duties properly, it arranges for his medical examination and takes such action as may seem desirable when the results of that examination are communicated. In particular, Pilots are medically examined after the occurrence of any accident to the vessel in their pilotage charge, if the circumstances tend to show that the accident was in any way attributable to physical unfitness on the part of the Pilot.

Pilots are not entitled to any salary while on pilotage duty, but receive as their remuneration a share, at present 50 per cent., but liable to alteration at the discretion of the Government of Bengal, of the pilotage dues paid by ships piloted by them. The Government of Bengal reserves to itself the right to require all Pilots to obtain a Home Trade Master Mariner's Certificate before they are promoted to be Senior Master Pilots. Every member of the Pilot Service is subject to such rules as the Government of India or as the Government of Bengal under the control of the Government of India, may from time to time, respectively, make in regard to discipline, leave, leave allowances, number of officers in the service, distribution into grades, tonnage of ships to be allotted to the several grades, etc., and in all respects he is amenable to such orders as may be passed by the Government of Bengal, and is liable to degradation, suspension and dismissal by the Government of Bengal for any breach of such rules or orders, or for misconduct.

Other Pilot Services.—Bengal is the only province that has a covenanted pilot service: elsewhere pilotage is under the control of the local Port Trust. In **Bombay**, for example, the Port Trust have drawn up the following rules for entry into the service:

To be eligible for admission to the Bombay Pilot Service, candidates must be British subjects, and at least 21 years of age but not more than 30. They must hold certificates of competency as Master and excellent testimonials as regards conduct, character and ability. They will be examined in the Port Office for form and colour vision as prescribed by the Board of Trade, and also an extra form vision test of each eye separately and must undergo an examination by, and produce a certificate from, the Medical Officer appointed by the Port Trustees that they are physically fit, and are of a sufficiently hardy and strong constitution to perform a Pilot's duty and that they, to all appearance, enjoy good health. Any Probationer may, with the sanction of the Port Officer, go before the Examining Committee, and if he passes he will be eligible for appointment as a Pilot when a vacancy occurs. A Probationer, not passing the required examination to qualify for performing a Pilot's duties within six months after the date of his appointment, is liable to be struck off the list. Promotion to the various grades in the Pilot service is generally given by seniority, but the Port Trustees reserve to themselves the right of passing over any Pilot. There are 2 Master Pilots and 15 Pilots who are paid fixed Salaries commencing at Rs. 750 per mensem and rising by yearly increments of Rs. 30 to Rs. 1,230.

The Press.

The newspaper Press in India is an essentially English institution and was introduced soon after the task of organising the administration was seriously taken in hand by the English in Bengal. In 1773 was passed the Regulating Act creating the Governor-Generalship and the Supreme Court in Bengal and within seven years at the end of the same decade, the first newspaper was started in Calcutta by an Englishman in January 1780 Exactly a century and a third has elapsed since, not a very long period certainly, a period almost measured by the life of a single newspaper, *The Times*, which came into existence only five years later in 1785; but then the period of British supremacy is not much longer, having commenced at Plassey, only twenty-three years earlier. Bombay followed Calcutta closely, and Madras did not lag much behind. In 1789 the first Bombay newspaper appeared, *The Bombay Herald*, followed next year by *The Bombay Courier*, a paper now represented by *The Times of India* with which it was amalgamated in 1861. In Bombay the advent of the press may be said to have followed the British occupation of the island much later than was the case in Calcutta. In Calcutta the English were on sufferance before Plassey, but in Bombay they were absolute masters after 1665, and it is somewhat strange that no Englishman should have thought of starting a newspaper during all those hundred and twenty-five years before the actual advent of *The Herald*.

The first newspaper was called *The Bengal Gazette* which is better known from the name of its founder as *Hicky's Gazette* or *Journal*. Hicky like most pioneers had to suffer for his enterprising spirit, though the fault was entirely his own, as he made his paper a medium of publishing gross scandal, and he and his journal disappeared from public view in 1782. Several journals rapidly followed Hicky's, though they did not fortunately copy its bad example. *The Indian Gazette* had a career of over half a century, when in 1833 it was merged into the *Bengal Harkaru*, which came into existence only a little later, and both are now represented by *The Indian Daily News* with which they were amalgamated in 1866. No fewer than five papers followed in as many years, the *Bengal Gazette* of 1780, and one of these, *The Calcutta Gazette*, started in February 1784, under the avowed patronage of Government, flourishes still as the official gazette of the Bengal Government.

In 1821 a syndicate of European merchants and officials commenced the publication of *John Bull in the East*, a daily paper which was intended to reflect Tory opinion in India and set an example to the Press generally in the matter of moderation and restraint. The name of this journal was altered to *The Englishman* by the famous Stocqueler in 1836.

From its commencement the press was jealously watched by the authorities, who put serious restraints upon its independence and pursued a policy of discouragement and rigorous control. Government objected to news of apparently the most trivial character affecting its servants. From 1791 to 1799 several editors were deported to Europe without trial and on short notice, whilst several more were censured and had to apologise. At the commencement of the rule of Wellesley Government promulgated stringent rules for the public press and instituted an official censor to whom everything was to be submitted before publication, the penalty for offending against these rules to be immediate deportation. These regulations continued in force till the time of the Marquis of Hastings who in 1818 abolished the censorship and substituted milder rules.

This change proved beneficial to the status of the press, for henceforward self-respecting and able men began slowly but steadily to join the ranks of journalism, which had till then been considered a low profession. Silk Buckingham, one of the ablest and best known of Anglo-Indian journalists of those days, availed himself of this comparative freedom to criticise the authorities, and under the short administration of Adam, a civilian who temporarily occupied Hastings' place, he was deported under rules specially passed. But Lord Amherst and still more Lord William Bentinck were persons of broad and liberal views, and under them the press was left practically free, though there existed certain regulations which were not enforced, though Lord Clare, who was Governor of Bombay from 1831 to 1835, once strongly but in vain urged the latter to enforce them. Metcalfe who succeeded for a brief period Bentinck, removed even these regulations, and brought about what is called the emancipation of the press in India in 1835, which was the beginning of a new era in the history of the Indian press. Among papers that came into being, was the *Bombay Times* which was started towards the close of 1838 by the leading merchants of Bombay, and which in 1861 changed its name to the *Times of India*. *The Bombay Gazette*, founded in 1791 ceased publication in 1914.

The liberal spirit in which Lord Hastings had begun to deal with the press led not only to the improvement in the tone and status of the Anglo-Indian press, but also to the rise of the Native or Indian Press. The first newspaper in any Indian language was the *Samachar Durpan* started by the famous Serampore Missionaries Ward, Carey and Marshman in 1818 in Bengali, and it received encouragement from Hastings who allowed it to circulate through the post office at one-fourth the usual rates. This was followed in 1822 by a purely native paper in Bombay called the *Bombay Samachar* which still exists, and thus was laid the foundation of the Native Indian Press which at the present day is by far the largest part of the press in India, numbering over 650 papers.

From 1835 to the Mutiny the press spread to other cities like Delhi, Agra, Gwalior, and even Lahore, whereas formerly it was chiefly confined to the Presidency towns. During

the Mutiny its freedom had to be temporarily controlled by the Gagging Act which Canning passed in June 1857 on account of the license of a very few papers, and owing still more to the fears of its circulating intelligence which might be prejudicial to public interests. The Act was passed only for a year at the end of which the press was once more free.

On India passing to the Crown in 1858, an era of prosperity and progress opened for the whole country in which the press participated. There were 19 Anglo-Indian papers at the beginning of this period in 1858 and 25 Native papers and the circulation of all was very small. The number of the former did not show a great rise in the next generation, but the rise in influence and also circulation was satisfactory. Famous journalists like Robert Knight, James Maclean and Hurris Mookerji flourished in this generation. The *Civil and Military Gazette* was originally published in Simla as a weekly paper, the first issue being dated June 22nd, 1872. Prior to and in the days of the Mutiny the most famous paper in Northern India was the *Mofussilite*, originally published at Meerut, but afterwards at Agra and then at Ambala. After a lively existence for a few years in Simla the *Civil and Military Gazette* acquired and incorporated the *Mofussilite*, and in 1876 the office of the paper was transferred from Simla to Lahore, and the *Gazette* began to be published daily.

INDIAN PRESS LAW.

Before 1835 all printing of books and papers was subject to licence by the Governor-General in Council, and the licences were issued or refused at the discretion of Government. Act XI of 1835 repealed the old Regulations and merely required registration of the printer and made a few minor requirements. That Act was replaced in 1867 by the present Press and Registration of Books Act, and, except for an Act which was in force for one year during the Mutiny, there was no further legislation directly affecting the Press until 1878 when the Vernacular Press Act was passed. That Act was repealed during the Viceroyalty of Lord Ripon in 1882. From that date until 1907 Government made no attempt to interfere directly with the liberty of the Press, the growth of sedition being dealt with in other ways by the passing in 1898 of section 124A of the Penal Code in its present form, which had been originally enacted in 1870, and by the introduction into the Penal Code of section 153A and into the Criminal Procedure Code of section 108. There were a certain number of prosecutions under those sections up to 1907, but the dissemination of sedition through the Press continued. In 1908 the Newspaper (Incitement to Offences) Act was passed which dealt with papers inciting to murder or to acts of violence. This Act failed to have the desired effect.

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion.

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) Control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

Repeal of Press Legislation.—By the autumn of 1917 the Government of India had begun to consider the desirability of modifying at least one section of the Press Act to which great exception had been taken on account of the wide powers that it gave. Finally, after more than once consulting Local Governments, a Committee was appointed in February 1921 after a debate in the Legislative Assembly, to examine the Press and Registration of Books Act, 1867, and the Indian Press Act, 1910, and report what modifications were required in the existing law. That Committee made an unanimous report in July 1921, recommending :—

(1) The Press Act should be repealed.

(2) The Newspapers Incitements to Offences Act should be repealed.

(3) The Press and Registration of Books Act and the Post Office Act should be amended where necessary to meet the conclusion noted below: (*a*). The name of the editor should be inscribed on every issue of a newspaper and the editor should be subject to the same liabilities as the printer and publisher, as regards criminal and civil responsibilities; (*b*) any person registering under the Press and Registration of Books Act should be a major as defined by the Indian Majority Act; (*c*) local Governments should retain the power of confiscating openly seditious leaflets, subject to the owner of the press or any other person aggrieved being able to protest before a court and challenge the seizure of such document, in which case the local Government ordering the confiscation should be called upon to prove the seditious character of the documents. The powers conferred by Sections 13 to 15 of the Press Act should be retained. Customs and Postal officers being empowered to seize seditious literature within the meaning of Section 124A of the I. P. C. subject to review on the part of the local Government and challenge by any persons interested in the courts; (*e*) any person challenging the orders of Government should do so in the local High Court; (*f*) the term of imprisonment prescribed in Sections 12, 13, 14 and 15 of the Press and Registration of Books Act should be reduced to six months; (*g*) the provisions of Section 16 of the Press Act should be reproduced in the Press and Registration of Books Act.

Press Association of India.—At the end of 1915 this Association was formed in Bombay. According to the articles of constitution "Its objects shall be to protect the press of the country by all lawful means from arbitrary laws and their administration, from all attempts of the Legislature to encroach on its liberty or of the executive authorities to interfere with the free exercise of their calling by journalists and press proprietors, and for all other purposes of mutual help and protection which may be deemed advisable from time to time." Members pay a minimum subscription of Rs. 10 annually. The affairs of the Association are managed by a Council.

Number of Printing Presses at Work, and Number of Newspapers, Periodicals, and Books Published.

Province.	Printing Presses.	Newspapers.	Periodicals.	Books.	
				In English or other European Languages.	In Indian Languages (Vernacular and Classical) or in more than one Language.
Bengal	752	117	176	560	2,143
Bihar and Orissa	137	20	37	96	690
United Provinces	462	128	225	228	1,600
Punjab	207	95	169	254	1,445
Delhi	59	17	21	15	127
North-West Frontier Province ..	21	1	....	....	....
Burma	158	53	93	8	174
Central Provinces and Berar ..	87	30	9	20	112
Assam	39	11	6	....	32
Ajmer-Merwara	15	3	10	7	43
Coorg	2	....	....	....	....
Madras	706	(a)214	669	638	1,790
Bombay	501	154	634	266	1,531
Total, 1918-19 ..	3,146	883	2,049	2,092	9,687
Totals .. 1917-18 ..	3,155	838	1,997	1,916	10,772
1916-17 ..	3,101	805	3,173	1,919	11,149
1915-16 ..	3,237	857	2,927	1,541	10,658
1914-15 ..	3,102	847	2,988	1,602	11,477
1913-14 ..	3,020	827	2,848	1,477	10,712
1912-13 ..	2,828	673	2,395	1,062	9,651
1911-12 ..	2,780	656	2,268	1,596	9,988
1910-11 ..	2,751	658	1,902	1,578	10,063
1909-10 ..	2,736	726	829	2,112	9,934
1908-9 ..	2,594	738	895	1,687	8,345
1907-8 ..	2,571	753	1,062	1,524	7,995

(a) For calender year.

Newspapers and News Agencies registered under the Press Rules and arranged alphabetically according to Station where they are published and situated.

NOTE.—*News Agencies are distinguished by an asterisk.*

Stations.	Title in full.	Day of going to Press.
Ahmedabad	Gujarati Punch	Sundays.
	Political Bhomiyo	Thursdays.
	Praja Bandhu	Saturdays.
Akola, Berar	Praja Paksha	Saturdays.
Akyab	Arakan News	Tuesdays and Fridays.
Aligarh	Aligarh Institute Gazette ..	Wednesdays.
Allahabad	Abhyudaya	Fridays.
	Hindustan Review	On first of every month.
	Leader	Daily, except Mondays.
	Pioneer	Daily.
	Reuter's Telegram Company, Ld.	....
	Independent	Daily.
Allahabad Katra ..	Sarva Shikshak	Monthly.
Amraoti	Bharat	Wednesdays.
	Kartawya	Tuesdays.
Amritsar	Daily Vakil	Daily.
	Dard	Daily.
Amroha	Ittihad	Saturdays.
Asansol	Ratnakar	Sundays.
Bagerhat	Jagaran	Sundays.
Bangalore	Daily Post	Daily.
	Kasim-ul-Akhbar	Mondays and Thursdays.
	Truth	Mondays and Thursdays.
Barisal	Barisal Hitaishi	Sundays.
Baroda	Jagriti	Weekly.
	Shree Sayaji Vijaya	Thursdays.
Bassein, Burma	Bassein News	Tuesdays and Fridays.
Batticaloa (Ceylon) ..	Lamp	Every other Saturday.
Belgaum	Belgaum Samachar	Mondays.
Benares City	Awazal Khalk	Every Wednesday.
	Bharat Jiwan	Sundays.
	Hindi Kesari	Wednesdays.
	Kashi Temperance Samachar ..	Monthly.
	Mahamandal Magazine	Monthly.

Stations.	Title in full.	Day of going to Press.
Bhavnagar	Jain	Saturdays.
	Jainhasan	Tuesdays.
Bijapur	Karnatak Vaibhav	Saturdays.
Bombay	Advocate of India	Daily.
	Akhbar-i-Islam	Daily.
	Akhbar-i-Soudagar	Daily, except on Sundays.
	Associated Press *	.....
	Bombay Chronicle	Daily.
	Bombay Samachar	Daily.
	Catholic Examiner	Saturdays.
	Gujarati	Saturdays.
	Indian Industries and Power ..	On the 15th of each month
	Indian Social Reformer	Saturdays.
	Indu Prakash	Daily, except Sundays.
	Jam-e-Jamshed	Daily, except Saturdays
	Kaiser-i-Hind	Saturdays.
	Lokmanya	Daily except Tuesdays.
	Mufide Rozgar	Sundays.
	Muslim Herald	Daily.
	O Amigo do Goano	Fridays.
	O Anglo-Lusitano	Saturdays.
	Rast Goftar, Parsi and Praja Mitra	Daily.
	Railway Times	Fridays.
	Reuter's Indian Journal	Daily.
	Reuter's Telegram Company, Ltd.	.....
	Sandesh	Daily.
	Sanj Vartaman	Daily, except Sundays.
	Shri Venkateshwar Samachar ..	Fridays.
	Sudhakar	Saturdays.
	Sunday Tatler	Sundays.
	Times of India	Daily. †
	Times of India Illustrated Weekly.	Wednesdays.
Bowringpet	Kolar Gold Fields News	Tuesdays.
Budaon	Akhbor Zulqarnain	6th, 13th, 20th and 27th of every month.
Calangute (Goa).. ..	A Voz do Povo	Saturdays.

† With *The Times of India* there are published every Tuesday a separate Supplement of *Indian Motoring* and every Friday an *Indian Engineering Supplement.*

Stations.	Title in full.	Day of going to Press.
Calcutta	Amrita Bazar Patrika	Daily.
	Associated Press *	.....
	Bangabasi	Wednesdays.
	Basumati	Daily.
	Bengalee	Daily, except Sundays.
	Bharata Mitra	Thursdays.
	Business World	Monthly.
	Calcutta Samachar	Daily.
	Capital	Thursdays.
	Catholic Herald of India	Tuesdays.
	Collegian	Bi-monthly.
	Empire (Calcutta Evening News).	Daily, except Sundays.
	Englishman	Daily.
	Hindoo Patriot	Daily, except Saturdays
	Hitabadi	Wednesdays.
	Indian and Eastern Engineer ..	14th of each month.
	Indian Daily News	Daily, except Sundays
	Indian Engineering	Thursdays.
	Indian Express	Once a month.
	Indian Mirror	Daily.
	Indian News Agency	.....
	Indian Planters' Gazette ..	Saturdays.
	Industry	Monthly.
	Madhuri	Monthly.
	Market Intelligence	Daily.
	Mussalman	Thursdays.
	Nayak	Daily.
	Railways	15th and last day of every month.
	Reuter's Telegram Company, Limited.	.....
	Sanjibani	Wednesdays.
	Samay	Wednesdays.
	Samyavadi	Daily.
	Statesman	Daily.
	Telegraph	.....
	Advocate	Daily.
	Times of India Illustrated Weekly.	Wednesdays.
	United Press Syndicate *	.....
	Vishwamitra	Daily.
	Young Men of India	Monthly.
Calicut	Kerala Sanchari	Wednesdays.
	Manorama	Tuesdays and Fridays.
	Mitavadi	Daily.
	West Coast Reformer	Sundays and Thursdays.
	West Coast Spectator	Wednesdays and Saturdays.
Cawnpore	Azad	Wednesdays.
	Cawnpore Journal	Daily.
	Prabha	Monthly.
	Pratap	Saturdays.
	Reuter's Telegram Company, Limited.	.....
	Zamana	25th day of every month.

Stations.	Title in full.	Day of going to Press.
Chandernagore	Probartak	Bi-monthly.
Chinsurah	Education Gazette	Tuesdays.
Chittagong	Jyoti	Wednesdays.
Cochin	Cochin Argus	Saturdays.
	Malabar Herald	Saturdays.
Cocanada	Ravi	Thursdays.
Colombo	Ceylon Catholic Messenger ..	Tuesdays and Fridays.
	Ceylon Daily News	Daily.
	Ceylonese	Daily.
	Ceylon Independent	Daily.
	Ceylon Morning Leader	Daily.
	Ceylon Observer	Daily.
	Dinakara Prakasa	Mondays, Tuesdays, Thursday and Saturdays.
	Dinamina	Daily, except Sundays.
	Dravida Mitran	Wednesdays and Saturdays.
	Gnanartha Pradipaya	Mondays and Thursdays.
	Islam Mittiran	Wednesdays and Saturdays
	Lakmina	Daily except Sundays.
	People	Daily.
	Sarasavi Sandaresa	Tuesdays and Fridays
	Times of Ceylon	Daily.
Contai	Nihar	Mondays.
Cuttack	Utkal Deepica	Fridays.
	Indian Sunday School Journal ..	Monthly.
Dacca	Dacca Gazette	Mondays.
	Dacca Prakash	Sundays.
	Herald	Daily.
Darjeeling	Darjeeling Visitor and Advertiser.	Mondays.
	Indian Daily News (Darjeeling Edition).	Daily.
Delhi	Associated Press	.....
	Daily Raigat	Daily.
	General News Agency and Book Depot.	Daily.
	Indian News Agency	.....
	Khilafat	6th, 14th, 22nd & 28th of every Month.
	Morning Post	Daily, except Sundays.
	Quaim	Weekly.
	Tamadun	Monthly.
	Vijaya	Saturdays.
	Weekly Urdu Bharat Sewak ..	Saturdays.
Dharwar	Dharwarvritt	Wednesdays.
	Karnatakavritta and Dhananjaya	Tuesdays.
	Raja Hansa	Daily.

Stations.	Title in full.	Day of going to Press.
Dhulia	Khandesh Vaibhav	Fridays.
Dibrugarh	Times of Assam	Fridays.
Gaya	Bihar Advocate and Kayastha Messenger.	Sundays.
Guntur	Deshabhimani	Daily.
Howrah	Bisva Duta..	Daily.
Hyderabad, Deccan	Musheer-i-Deccan	Daily.
	Sahifa-i-Rozana	Daily.
	Usman Gazette	Daily.
Hyderabad, Sind ..	Bharatvasi	Daily.
	Musafir	Saturdays.
	Sind Journal	Wednesdays.
	Sind Mail	Daily.
	Sindvasi	Daily.
Jaffna	Ceylon Patriot and Weekly Advertiser.	Tuesdays.
	Jaffna Catholic Guardian.. ..	Saturday Mornings.
	Sithia Veda Pathukavalan ..	Fortnightly.
	Vasaviliau Jaffna Native Opinion	Fortnightly.
Jaffna (Vannarponnai) ..	Hindu Organ	Wednesdays.
Jorhat	Englishman Bulletin	.....
Jubbulpore	India Sunday School Journal ..	Third Thursday of every month
Karachi	Daily Gazette	Daily.
	New Times	Daily.
	Parsi Sansar	Saturdays.
	Reuter's Telegram Company, Limited.	....
	Rozana Binpar	Daily.
	Sind Observer	Wednesdays and Saturdays.
	Sind Sudhar	Saturdays.
Khulna	Khulna Basi	Saturdays.
Kolhapur City	Vidyavilas	Fridays.
Kottayam	Kerala Bharati	Tuesdays and Fridays.
	Malayala Manoram	Wednesdays and Saturdays.
	Nazrani Deepika	Tuesdays
Kurnnegala	Abhinawa Kawata Angana ..	Days prior to the 1st and 15th of every month.
Lahore	Akhbar-i-Am	Daily.
	Associated Press	.....
	Civil and Military Gazette ..	Daily, (Sundays excepted).
	Desh	Daily

Station.	Title in full.	Day of going to Press.
Lahore	Haq	Fridays.
	Liberal	Sundays.
	Paigham-i-Sulah	Sundays and Wednesdays.
	Pratap	Daily.
	Paisa Akhbar	Daily.
	Rajput Gazette	1st, 8th 16th and 24th of every month.
	Reuter's Telegram Company, Limited.	.....
	Tribune	Daily, except Sundays.
	Urdu Daily Railway	Daily.
	Watan	Thursdays.
	Zamindar	Daily
Larkana	Khairkhah	Saturdays.
	Larkana Gazette	Fridays.
Lucknow	Advocate	Wednesdays and Saturdays.
	Anand	Thursdays.
	Daily Hamdam	Daily
	Indian Daily Telegraph	Daily.
	Indian Witness	Wednesdays.
	Kaukab-i-Hind	Wednesdays.
	Muslim Gazette	Tuesdays.
	Oudh Akhbar	Daily, except Sundays.
Madras	Al-Mazmun	On the first of every month.
	Andhra Patrika	Tuesdays.
	Anglo-Indian	Thursdays.
	Associated Press	.....
	Christian Patriot	Weekly.
	Daily Express	Daily, except Saturdays.
	Desabaktan	Daily.
	Hindu—See against *Mount Road*.	.....
	Indian Railway Journal	15th of every month.
	Jarida-i-Rozgar	Saturdays.
	Justice	Daily.
	Law Times	Saturdays.
	Madras Mail	Daily.
	Muhhammadan	Mondays and Thursdays.
	Mukhbir-i-Deccan	Wednesdays.
	New India	Daily.
	Reuter's Telegram Company, Limited.	.....
	Shamshul Akhbar	Mondays.
	Swadesa Mitran	Daily.
Madura	South Indian Mail	Mondays.
Mandalay	Upper Burma Gazette	Daily.
Margao (Goa) ..	A Terra	Wednesdays and Saturdays.
	Noticias	Mondays.
	Ultramar	Mondays and Fridays.

Stations.	Title in full.	Day of going to Press.
Mattancheri	Chakravarthi	Saturdays.
Mhow	Satyarth Patrika	Thursdays.
Mirpurkhas	Mirpurkhas Gazette	Wednesdays.
Mirzapur City	Khichri Samachar	Saturdays.
Moulmein	Moulmein Advertiser	Daily.
Mount Road, Madras ..	Hindu	Daily, except Sundays.
Mussoorie	Mussoorie Times	Thursdays.
Muttra	Jain Gazette	Mondays.
Muvattupuzha	Kerala Dheepika	Saturdays.
Mymensingh	Charu Mihir	Tuesdays.
Nagercoil	Travancore Times	Tuesdays.
Nagpur	Desha-Sewak	Mondays.
	Marwadi	Tuesdays.
	Sankalpa	Daily.
	Sankalpa Mahal	Fridays.
	Young Patriot	Sundays.
Naini Tal	Naini Tal Gazette	Wednesdays.
Nova Goa	1 Iariode Noite	Daily.
	Heraldo	Daily, except Mondays.
	O'Debate	Mondays.
	O'Heraldo	Daily, except Sundays and holidays.
Ootacamund	South of India Observer and Nilgiri News	Daily issue except Sundays.
Orai	Utsah	Thursdays.
Pandharpur	Pandhari Mitra	Sundays.
Panjim Goa	O'Crente	Saturdays.
Parur	Uttara Thiraka	Saturdays.
Patna	Beha Herald	Saturdays.
	Express	Daily.
	Search Light	Saturdays
Pen	Kolaba Samachar	Fridays.
Peshawar	Peshawar Daily News	Daily.
	Reuter's Telegram Company, Ld.	.....
Poona	Deccan Herald	Daily.
	Dnyana Prakash	Daily, except Mondays.
	Kesari	Tuesdays.
	Lokasangraha	Daily.
	Maharatta	Sundays.
	Rajkaran	Sundays.

Stations.	Title in full.	Day of going to Press.
Quetta	Baluchistan Gazette	Wednesdays and Saturdays.
	Baluchistan Herald Daily Bulletin.	Daily.
	Quetta News War Bulletin ..	Daily.
Quilon	Desabhimani	Wednesdays.
	Malayali	Wednesdays and Saturdays
Rajkot	Kathiawar Times	Wednesdays and Sundays.
Rangoon	Burma Sunday Times	.....
	Rangoon Gazette	Daily, except Mondays.
	Rangoon Times	Daily, except Sundays.
	Rangoon Mail	Saturdays.
Ratnagiri	Bakool	Saturdays.
	Satya Shodhak	Sundays.
Rawalpindi	Pindi Mail	Daily.
Satara	Shubha Suchaka	Fridays.
Satara City	Prakash	Wednesdays.
Secunderabad ..	Hyderabad Bulletin	Daily.
	Notice Sheet	Daily.
Shahjahanpur	Sarpunch	Daily.
Sholapur	Kalpataru	Sundays.
	Sholapur Samachar	Tuesdays.
Silchar	Surma	Sundays
Simla	Associated Press	.....
	Indian News Agency	.....
	Indian War Cry	27th of each month.
	Reuter's Telegram Company, Limited.	.....
Sukkur	Sindhi	Saturdays
Surat	Deshi Mitra	Thursdays.
	Deshodaya	Tuesdays.
	Gujrat Mittra and Gujarat Darpan	Saturdays.
	Jain Mitra	Wednesdays.
	Peoples' Business Gifts	Monthly.
	Praja Pokar	Wednesdays.
	Surat Akhbar	Sundays.
Sylhet	Paridarsaka	Wednesdays
Tinnevelly	Kalpaka	Monthly.
Trichur	Lokaprakasam	Mondays.
Tiruvalla	Kerala Taraka	Wednesdays
Trivandrum	Bharata Kesari	Bi-Weekly.
	Daily News	Daily.
	Western Star	Tuesdays, Thursdays and Saturdays.
Vizagapatam	Andhra Advocate	Fridays.
Wai	Modavritta	Mondays.
	Vrittasar	Mondays.

Societies: Literary, Scientific and Social.

AGRICULTURAL AND HORTICULTURAL SOCIETY OF INDIA (Calcutta).—Founded 1820. Annual subscription Rs. 32. Entrance fee Rs. 8. *Secretary*, S. Percy-Lancaster, F.L.S., F.R.H.S., 1, Alipore Road, Alipore.

AGRI-HORTICULTURAL SOCIETY OF BURMA.—*Secretary*, L. Aubert, Esq., Agri-Horticultural Gardens, Kandawglay.

AGRI-HORTICULTURAL SOCIETY OF MADRAS.—Established 1835. Quarterly subscription for members in Class A Rs. 7, in Class B Rs. 3. *Secretary*, E. R. Osborne, Teynampett, S. W., Madras.

ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Founded 1886, to promote the prosecution of Anthropological research in India; to correspond with Anthropological Societies throughout the world; to hold monthly meetings for reading and discussing papers; and to publish a journal containing the transactions of the Society. Annual subscription Rs. 10. *Secretary*, Shams-ul-Ulma Dr. Jivanji Jamshedji Modi, B.A., Ph.D., C.I.E., Town Hall, Bombay.

ASIATIC SOCIETY OF BENGAL (Calcutta).—*Secretary*, A. H. Harley, M.A., 1, Park Street, Calcutta.

BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA.—The Institute was inaugurated on the 6th of July 1917, the 80th birthday of Sir R. G. Bhandarkar, at the hands of H. E. Lord Willingdon, who became its first President. Its objects are to provide an up-to-date Oriental Library, to train students in the methods of research and to act as an information bureau on all points connected with Oriental Studies. Sir R. G. Bhandarkar has already bequeathed to the Institute his valuable private library of Oriental books. Since the 1st of April 1918 the Government of Bombay have transferred to the Institute the unique collection of manuscripts at the Deccan College together with a maintenance grant of Rs. 3,000 a year. Government have likewise entrusted to the Institute for the next five years the sole administration of the Budget grant of Rs. 12,000 a year on account of publication. The Institute has undertaken to edit the *Mahabharata* critically at the request of the Chief of Aundh who has promised a grant of Rs. 6,000 annually for that purpose. Grants have also been promised by the University of Bombay, and the Governments of Burma and Mysore. The Institute has started a journal called "Annals of the Bhandarkar Institute" published twice a year. The Institute also held under its auspices the First Oriental Conference on the 5th, 6th and 7th of November 1919, under the patronage of H. E. Sir George Lloyd and the presidency of Sir R. G. Bhandarkar. Minimum membership dues Rs. 10 a year or Rs. 100 compounded for life. *Secretary*, Prof. R. D. Karmarker, M.A., Fergusson College Road, Poona City.

BOMBAY ART SOCIETY.—Founded 1888, to promote and encourage Art by exhibitions of Pictures and Applied Arts, and to assist in the establishment and maintenance of a permanent gallery for pictures and other works of Art. Annual exhibition usually every February. Annual subscription Rs. 10; Life member Rs. 100. *Secretary*, S. V. Bhandarkar, Bandra, Bombay.

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY.—Founded 1804, to investigate and encourage Oriental Arts, Sciences and Literature. Annual subscription Rs. 50. *Secretary*, A. F. Kindersley, I.C.S., Town Hall, Bombay.

BOMBAY NATURAL HISTORY SOCIETY.—Founded 1883, to promote the study of Natural History in all its branches. The Society has a membership of about 1,700 and a small museum with a representative collection of the different vertebrates and invertebrates found in the Indian Empire and Ceylon. A Journal is published quarterly which contains articles on different natural history subjects as well as descriptions of new species and local lists of different orders. In the more recent numbers, serial articles on game birds, common snakes, and common butterflies have been appearing. Annual subscription Rs. 25. Entrance fee Rs. 20 (*President*, H. E. Sir George Lloyd, G.C.I.E., *Vice-Presidents*, Mr. J. D. Inverarity, The Hon. Sir Norman Macleod, and H. H. the Maharao of Cutch, G.C.S.I. (*Honorary Secretary*, R. A. Spence, M.L.A., F.Z.S., *Curator*, B. C. Ellison, *Asstt. Curator*, S. H. Prater. Office and Museum, 6, Apollo Street, Bombay.

BRITISH AND FOREIGN BIBLE SOCIETY.—Since 1811 the British and Foreign Bible Society has been at work in this country. It has 6 Auxiliaries in India and an Agency in Burma. The first Auxiliary was established in Calcutta, in 1811, then followed the Bombay Auxiliary in 1813, the Madras Auxiliary in 1820, the North India Auxiliary in 1845, the Punjab Auxiliary in 1863, the Bangalore Auxiliary in 1875, while the Burma Agency was founded in 1899. The Bible or some portion of it is now to be had in nearly 100 different Indian languages and dialects and the circulation throughout India and Burma reached over 1½ million copies in 1920. The Bibles, Testaments, and Portions in the various Vernaculars are sold at rates which the very poorest can pay, and at considerable loss to the Society. Grants of English Scriptures are made to Students who pass the various University examinations, whose applications are countersigned by their Principals, as under:—

The 4 Gospels and the Book of Acts in 1 Vol. to Matriculates.

The New Testament and Psalms to Intermediates.

The Bible to Graduates.

Last year over 12,000 volumes were so distributed. Portions of Scriptures in the important vernaculars have been prepared in

raised type for the use of the Blind and large grants of money are annually given to the different Missions, to enable them to carry on Colportage and Bible Women's work. Besides the British and Foreign Bible Society, there is Bible work carried on in India, Assam and Burma in a much smaller way by the Bible Translation Society—which is connected with the Baptist Missionary Society—the American and Canadian Baptist Mission, the National Bible Society of Scotland, and the Tranquebar Tamil Bible Society.

The following table shows the growth in the British & Foreign Bible Society's work during the past few years in India and Burma:—

CIRCULATION OF THE B.F.B.S. IN INDIA.

Auxiliaries.	1920.	1919.	1918.	1917.	1916.
Calcutta	177,963	207,634	182,436	172,734	139,499
Bombay	416,061	313,272	230,499	202,407	189,594
Madras	312.484	322,630	290,650	275,802	275,264
Bangalore	67,482	66,114	Not to hand.	32,974	34,265
North India	458,204	297,509	213,460	226,546	189,564
Punjab	104,595	109,774	98,296	150,366	157,680
Burma	117,968	124,170	101,003	107,623	105,127
Total copies of Scriptures ..	1,654,757	1,441,403	1,116,344	1,168,452	1,090,993

These returns do not include the copies which any Auxiliary has supplied to London or to other Auxiliaries and agencies during the year.

BRITISH MEDICAL ASSOCIATION (Bombay Branch).—Founded 1886, to promote Medical and the Allied Sciences and the maintenance of the honour and interests of the Medical Profession. *Secretary*, Dr. D. R. Bardi, Bombay.

BOMBAY MEDICAL UNION.—Founded 1883 to promote friendly intercourse and exchange of views and experiences between its members and to maintain the interest and status of the medical profession in Bombay. The entrance fee for Resident members Rs. 5, monthly subscription Rs. 2. Absent members Re. 1, and non-resident members yearly subscription Rs. 5. *President*, Dr. S. K. Engineer. *Secretaries*: Dr. R. D. Mody and Dr. F. A. K. Contractor. *Hon. Librarians*, Dr. B. P. Sabawalla and Dr. K. S. Patel. *Treasurer*, Dr S. P. Kapadia, 123, Esplanade Road, Bombay.

BOMBAY SANITARY ASSOCIATION.—Founded to create an educated public opinion with regard to sanitary matters in general; (*b*) to diffuse the knowledge of sanitation and hygiene generally, and of the prevention of the spread of disease amongst all classes of people by means of lectures, leaflets and practical demonstrations and, if possible, by holding classes and examinations; (*c*) to promote sanitary science by giving prizes, rewards or medals to those who may by diligent application add to our knowledge in sanitary science by original research or otherwise; (*d*) to arrange for homely talk or simple practical lectures for mothers and girls in the various localities and different chawls, provided the people in such localities or chawls give facilities. The Sanitary Institute Building in Princess Street, which has lately been built by the Association, at a cost of nearly Rs. 1,00,000 the foundation stone of which was laid by Lady Willingdon in March, 1914, and opened in March, 1915, is a large and handsome structure with a large Lecture Hall, Library, Museum, etc., and also provides accommodation for King George V. Anti-Tuberculosis League Dispensary and Museum and the Office of the Assistant Health Officer C and D Wards and the Vaccination Station and Eye Dispensary. *Hon. Secretary*, Dr. J. E Sandilands, M.D., D.P.H., Executive Health Officer, Bombay.

EUROPEAN ASSOCIATION.—The European Association was established in 1883 under the title of the European and Anglo-Indian Defence Association and was re-established in 1912 under the title of the European Defence Association, but the present title was adopted in 1913. The Association has for its objects the general protection of European interests and the promotion of European welfare. The Association numbers 8,261. The Head Offices are at Dalhousie Square, Calcutta. *President*, Mr. G. Morgan.

BRANCHES OF THE EUROPEAN ASSOCIATION.

ASSAM VALLEY, DIBRUGARH.—*Chairman*, Mr. L. A. Rottey: *Hon. Secretary*, Mr. A. L. Allum.

BIHAR, MOZUFFERPORE.—*Chairman*, Mr. P. Kennedy; *Hon. Secretary*, Mr. J. M Wilson.

MONGHYR (Sub-Branch).—*Chairman*, Mr. J. C. Aguilar; *Secretary*, Mr. C. H. C. Havelock

BOMBAY.—*Chairman*, Mr. W. A. Haig-Brown; *Secretary*, Miss M. M. Brown.

BURMA, RANGOON.—*Chairman*, Mr. J. W. Richardson; *Hon. Secretary*, Mr. R. Thompson Stoneham.

DARJEELING.—*Chairman*, Mr. E. A. Scarth; *Hon. Secretary*, Mr. Kenneth Mackenzie.

DELHI.—*Chairman*, Mr. H. H. Yule; *Hon. Secretary*, Mr. R. Macpherson.

DOOARS, JALPAIGURI.—*Chairman*, Mr. H. B Bradant Smith. *Hon. Secretary*, Mr. J. A. Polewhale.

MADRAS.—*Chairman*, Mr. H. P. E. Rae: *Joint Hon. Secretaries*, Messrs. A. D. Charles and P. Holt.

PUNJAB, LAHORE.—*Chairman*, Mr. Owen Roberts; *Secretary*, Mr. L. E. Banfield.

RAJPUTANA, AJMER.—*Chairman*, Mr. W. S. Fraser. *Hon. Secretary*, Mr. L. N. Lloyd.

SIND, KARACHI.—*Chairman*, Mr. W. D. Young, *Hon. Secretary*, Mr. E. J. McNulty.

SURMA VALLEY, SILCHAR.—*Chairman*, Mr. A. F. Stewart. *Hon. Secretary*, Mr. J. C. Henderson.

UNITED PROVINCES, CAWNPORE.—*Chairman*, Mr. S. H. Taylor. *Hon. Secretary*, Mr. J. G. Ryan.

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (Calcutta).—*Secretary*, Prof. C. V. Raman, M.A., 210, Bow Bazar Street, Calcutta.

INDIAN LIBERAL CLUB.—Started on 30th March 1917, to promote a systematic study of politics in general and Indian politics in particular, to organise free and well informed discussions on current political topics as well as on abstract questions to provide facility for collecting information in questions arising, or necessary to be raised, in the Imperial and Provincial Legislative Councils and to form and maintain a library.
Office : Servants of India Society, Sandhurst Road. *President*, Sir Narayan Chandavarkar. *Secretaries*, Mr. J. R. Gharpure, B.A., LL.B., and Mr. C. S. Deole, B.A.

INDIAN ECONOMIC SOCIETY (BOMBAY).—Started in 1915, with the object of affording facilities for an accurate and scientific study of economics, for the formation and dissemination of current economic ideas and for collecting first-hand information regarding the industry and commerce of the country with a view to the removal of difficulties in the way of their promotion and development. The Society arranges periodical discussions and publishes pamphlets and it holds weekly Marathi Class in Economics The Society also publishes a quarterly journal entitled "The Journal of the Indian Economic Society." Subscription, a minimum of Rs. 6 a year. *President*, Mr. J. B. Petit, *Secretaries*, Mr. C. S. Deole of the Servants of India Society. Mr. H. S. Spencer, Mr. Gulabchand Devchand, Mr. M. D. Altekar. *Office*—Servants of India Society's Home, Sandhurst Road, Girgaon, Bombay.

INDIAN MATHEMATICAL SOCIETY—Founded in 1907 for the advancement of Mathematical studies in India. It conducts a bi-monthly journal in which papers on mathematical subjects are published and maintains a library with current mathematical periodicals in all languages and new books on the subject. The library is located in the Fergusson College, Poona, whence the journals and books are circulated to members by post. The journal of the Society is published in Madras. There are about 150 members from all parts of India. *President*, Balak Ram, I.C.S., District Judge, Sukkur, *Secretarries*, Prof. D. D. Kapadia, Poona, and Prof. M. T. Naraniengar, Bangalore. *Librarian*, The Hon. Mr. R. P. Paranjpye, Poona.

INDIAN SOCIETY OF ORIENTAL ART (Calcutta.) —*Joint Hon. Secretaries*. C.W.E. Cotton, and G. N. Tagore, *Assistant Secretary* : P. Chatterjee. *Office* :—Suite, 12, Samavaya Mansions, Calcutta.

INDIA SUNDAY SCHOOL UNION.—The India Sunday School Union is a large indigenous interdenominational Society having the sympathy and co-operation of the greater number of Missionary Societies in India. The chief objects of the Union are the promotion of systematic and careful Bible study, and the increased efficiency of Sunday Schools in India. Its operations extend beyond the borders of India itself to Mesopotamia, Siam and Borneo. Approximately 750,000 Sunday School scholars and teachers and 13,944 Sunday Schools are connected with the Union, speaking 45 vernaculars. One Central and 60 Provincial and Mission Committees control its Indian work, which forms part of a world-wide movement with a membership of 35,000,000. Her Excellency Lady Chelmsford, C.I., G.B.E, is the Patroness.

The India Union was founded in Allahabad in 1876. Yearly examinations are held for both teachers and scholars in thousands of centres, for which medals, prizes, scripture awards, and certificates are granted to successful candidates. Upwards of 276,000 candidates have been examined in six months' Bible study since 1896, no less than 250,000 granted illummated certificates and in 1920 nearly 54 medals were awarded. Notes on the daily portions of the Interdenominational Bible Reading Association are published by the I. S. S. U. in English and 14 Vernaculars, and 50 editions of the S. S. Lesson Expositions are published in 20 Vernaculars. In addition, there is a large publication of literature dealing with all phases of child study and moral and religious training. The monthly publication of the Union is the *India Sunday School Journal*. The Teachers, Training Department is under the care of Mr. E. A. Annett, supported by the W. S. S. A.
General Secretary of the Union, the Rev. R. Burges, India Sunday School Union, Jubbulpore.

INSTITUTION OF ENGINEERS (INDIA).—The organisations of the Institution commenced in 1919 and it was inaugurated by H. E. Lord Chelmsford early in 1921. Its object is to promote and advance the science, practice and business of engineering in India on the same lines as are adopted by the Institutions of Civil, Mechanical and Electrical Engineers in the United Kingdom. The standard of qualification is the same. Membership is divided into three classes, *viz.*, Members, Associate Members and Associates, and there is an additional class for students. *Offices*.—Clive Buildings, Calcutta.

MADRAS FINE ARTS SOCIETY.—*Patron* :—H. E. the Rt. Hon. Lord Willingdon ; *President* :—The Hon. Mr. Justice F. D. Oldfield, I.C.S., *Secretary* :—A. R. Loftus Tottenham, I.C.S., Snowdon, Adyar P. O., Madras.

MADRAS LITERARY SOCIETY AND AUXILIARY OF THE ROYAL ASIATIC SOCIETY.—*Secretary*, S. J. Crawford, M.A., B. Litt., Wingate, Mylapore, Madras.

NATIONAL INDIAN ASSOCIATION.—Founded in 1870. Its objects are :—(*a*) To extend in England, knowledge of India, and interest in the people of that country. (*b*) To co-operate with all efforts made for advancing Education and Social Reform in India. (*c*) To promote friendly intercourse between English people

and the people of India. In all the proceedings of the Association the principle of non-interference in religion and avoidance of political controversy is strictly maintained. It has branches in Bombay, Madras, Ahmedabad, Nagpur, Calcutta, Rangpur, Poona & Lahore. *Hon. Secretary*, Miss Beck, 21, Cromwell Road, London. Publication, *The Indian Magazine and Review*, a monthly Journal which chronicles the doings of the Association in England and in India, and takes note of movements for educational and social progress. It publishes articles about the East to interest Western readers, and articles about the West to interest readers in the East.

LIFE MEMBERS.—Ten Guineas Annual Subscriptions: Members one Guinea; County Members, Ten Shillings; Associates (Students), Seven shillings and Six pence.

PHILATELIC SOCIETY OF INDIA.—Annual subscription Rs. 15. *Secretary*: Jno. Godinho, 15, Burrow's Street, Bombay

PHOTOGRAPHIC SOCIETY OF INDIA (Calcutta). —Annual subscription Rs. 24 (Town Members) and Rs. 12 (Mofussil members). Entrance fee Rs. 20 and Rs. 10. The Society distributes a monthly journal to members, and undertakes developing, printing and enlarging work. There are excellent workrooms, apparatus and reading rooms at the Society's Headquarters at 40, Chowringhee Road, Calcutta, *Hon. Secretary*: E. Rogers, 40, Chowringhee Road, Calcutta.

POONA SEVA SADAN SOCIETY.—This Institution was started in 1909 by Mrs. Ramabai Ranade, Mr. G. K. Devadhar and a few other ladies and gentlemen in Poona and registered in 1917. It is now working independently, though for a part of the intervening period it was conducted as a branch of the Bombay Seva Sadan. Its main object is to make women self-reliant and to train them for missionary work undertaking educational and medical activities for their sisters and brethren, especially the former in backward areas and working on a non-sectarian basis The instruction is free except for the Music Classes and for Special Classes in English, etc. There are seven different departments sub-divided into 46 classes Arrangements are made for training Nurses and Midwives and Sub-Assistant Surgeons at the Sassoon Hospital, Poona, and a hostel is maintained for the former and another for those attending the Sub-assistant Surgeon's Class. There is a full-fledged Training College with 130 students for training Mistresses for vernacular schools. This College is probably the only college in India maintained by a non-official, non-Christian missionary body teaching the full course. The results of the Certificate Examinations held last year under the authority of the local Government Training College for Women were as follows: III year 9, II year 11, and I year 21, thus working up the percentage of 60. The Practising School for little girls attached to the Training College has now ten classes with 240 students reading up to the Marathi VI Standard, English being taught in the top three standards Primary Classes for grown up women teaching up to the Marathi V Standard are attended by 165 women. It is here that poor women are recruited for the work of teacher, nurse, midwife, or doctor. Special classes for teaching English, First Aid, Home Nursing were attended by 54 students; the Music Classes by 76 students, and the Workroom Classes for teaching Sewing, Embroidery, Hostery and Weaving by 160 students. Thus the total number of pupils is 874 to-day (including about 150 duplications). There are four hostels, two of which are located at the headquarters and the other two in the Raste's Peth and the Somwar Peth for Nurses, etc., under training at the Sassoon Hospital. The number of resident students is above 150 in these four hostels. In connection with the medical branch a Committee has been formed in England, which will enable the Society to send fully qualified Nurses there to undergo further training. Now Her Excellency the Hon'ble Lady Lloyd is the Honorary Patroness along with Lady Willingdon, Lady Sydenham and Lady Chelmsford. The institution is largely supported by public contributions and Government assistance. The annual expenditure roughly comes up now to Rs. 75,000, *President*: Mrs. Ramabai Ranade; *Honorary Organiser and General Secretary*: Mr. Gopal Kishna Devadhar, M.A.; *Local Secretary and Treasurer*: Mrs. Yamunabai Bhat; *Lady Superintendent and Secretary for Development and Collection*: Mrs. Janakibai Bhat; *Secretary, Nursing Committee*: Rao Bahadur Dr. P. V. Shikhare, L. M. & S.

PRESS-OWNERS' ASSOCIATION, Bombay—Started on 30th April 1919 to promote the interests of the printing and litho presses and alike trades, to bring about harmony and co-operation among press owners and proprietors of alike trades and to take such steps as may be necessary in furtherance of the above objects.

Office:—Servants of India Society, Sandhurst Road, Bombay 4.

President:—Shet Pandurang Javjee.

Secretaries:—Mr. Manilal Desai and Mr. C. S. Deole, B.A.

RANGOON LITERARY SOCIETY.—*President*: Dr. T. F. Pedley; *Hon. Secretary*: Mr. Hunter, 17, York Road.

ROYAL SOCIETY OF ARTS, INDIAN SECTION.—This Society was founded in London in 1754. Its recently published history by Sir Henry Trueman Wood, late Secretary of the Society, gives the following account of the Indian Section. In 1857, a proposition was made by Mr. Hyde Clarke, who wrote to the Council suggesting that "a special section be formed for India, another for Australia, one for English, America and so on." It was suggested that the Indian Section should meet once a fortnight for the reading of papers. Nothing came of the suggestion until ten years later when Mr. Hyde Clarke returned to England, and in 1868 he renewed his proposal, but only proposing the formation of a committee which should organise conferences on Indian subjects. This time the suggestion was taken up more warmly. Mr. Hyde Clarke himself was placed on the Council, and the Indian Conferences, which soon developed

into the Indian Section, were started. "The Indian Section thus established became a most important department of the Society. It has had great results in India by spreading information as to the directions which the development of Indian manufactures and Indian products could most usefully take, and in England by giving similar information as to the industrial resources and progress of India itself. The Section has received great help from the Indian press and it has in return been of service to the Indian press in supplying useful information to it. It has been of great value to the Society itself as the means by which many members have been added to its list, so that in fact, thanks to a very large extent to the work of the Indian Section and of the allied section for the Colonies, a large proportion of the present number of members come from the dependencies of the Empire abroad." *Secretary of the Society*: G. K. Menzies, M.A.; *Secretary of the Indian and Colonial Sections*: S. Digby, C.I.E., 18, John Street, Adelphi, London, W. C. 2.

SERVANTS OF INDIA SOCIETY.—The Servants of India Society which was founded by the late Hon'ble Mr. Gopal Krishna Gokhale, C.I.E., in 1905, has its Head-quarters in Poona and its objects are "to train national missionaries for the service of India and to promote by all constitutional means the true interests of the Indian people." Its government is vested in the First member or President and a Council. On the death of Mr. Gokhale in February, 1915, the Hon'ble Mr. V. S. Srinivasa Sastri was elected President. He has again been re-elected for a further term of three years. It has at present four branches, *viz.*, (1) in Bombay, (2) in Madras, (3) in the United Provinces, (4) in the Central Provinces. Each Branch consists of ordinary members, members under training and permanent assistants who work under the direction of a Senior Member. The branches engage both in propagandist and active work of political, educational, social, agricultural and philanthropic character in which they secure the help of a large number of voluntary workers, both men and women. A fair idea of the work of a branch can be had from a brief description of the operations of the BombayBranch whose members have so far undertaken activities in various fields. (1) Social purity like the Holika Sammelan of Bombay, (2) Social reform organization under the auspices of the National Social Conference, (3) rousing public opinion about elementary education, (4) promotion of the cause of elevation and education of Indian women by building up institutions like thePoona Seva Sadan, with 875 (including duplications of about 125) women and girl pupils in nearly 50 classes of its 8 departments and four hostels in the city. Mr. G. K. Devadhar, M.A., is its Hon. Organiser and General Secretary. (5) Social Service as carried out by the Social Service League of Bombay of which Mr. N. M. Joshi, B.A., M.L.A., is the Honorary General Secretary,(6) spread of co-operative movement among the agriculturists, compositors in the city of Poona and mill-hands in Bombay. The co-operative societies, as at Hadapsar and other villages around Poona, started for the benefit of these poor people, number over 35 with a total membership of over 1,800, capital of nearly three lakhs and a total turn-over of five lakhs per year. Nineteen of these societies which are in Bombay for poor labouring classes are so conducted as to free their members entirely from their chronic indebtedness. Their membership consists of sweepers, scavengers, mill-hands numbering above 550 and debts amounting to nearly three lakhs of rupees have been cleared off Moreover, educational work was organized by starting a Co-operative Quarterly and by starting a Co-operative Secretaries, Training Class in Bombay for 60 Secretaries from the various districts for three years. These are now transferred to the Central Co-operative Institute, Bombay. These three experiments on such a scale were the first of their kind in India, (7) relief work connected with widespread calamities by organizing the Plague Relief Committee of Poona, which succeeded in making inoculation popular in the Deccan, the Salumbra Fire Relief Committee which arranged for the Relief to sufferers for five years and by undertaking a scheme of non-official relief during the famines of 1907-08 and 1914 in the United Provinces, the famine in Gujarat and Kathiawar of 1911-12 and the famine of 1913 in the district of Ahmednagar, and that of 1918-1919 in Gujerat and the Deccan; and in 1920 in Orissa near Puri, (8) Influenza relief was well organized by members of these associations in Bombay and Poona, (9) organizing public opinion on the question of Indians in South Africa, (10) its political work is conducted strictly on constitutional lines and thus it was able to start District Congress Committees in several wards of the city of Bombay. These conducted a political quarterly, (11) it has started in Bombay an organisation called the Indian Economic Society with a view to promoting the study of Indian economics on right lines and also conducts a vernacular class. Mr. C. S. Deole, B.A., is one of the Hon. Secretaries. (12) A new association called the Liberal Club has been started to carry on political propaganda. Besides, the Society was engaged in conducting a scheme of welfare work to supply cheap grain, cheap cloth and cheap credit at Jamshedpur, which may be resumed again by the Branch getting it worked on behalf of one of its organisations. One of its Members has started a Gujarati ladies' organisation called the Bhagini Samaj for work among women in Gujarat and Kathiawar. Quite recently the United Provinces Branch organised a band of volunteers who rendered assistance, in a manner that drew general approbation, to the pilgrims at the Kumbha Mela in Hardwar and Allahabad, the ladies of the Poona Seva Sadan assisting in this work. The Society engages in journalistic work also, having in its control the *Hitavada*, an English weekly in Nagpur, the *Dnyan Prakash*, a Marathi daily and Weekly in Poona, and the *Hindustani* an Urdu weekly in Lucknow. The Society has been conducting, with Mr. Vaze as editor, an English weekly called *The Servant of India*. The U. P. Branch has in addition undertaken the publication of

pamphlets on public questions and has sent out three such publications together with a large quantity of leaflets. This Branch has taken lead in organising the *Boy Scout Movement* all over the province through the local Seva Samitis. The Madras Branch engages itself principally with co-operative organisation, publishing in three languages Co-operative Bulletin, Co-operative Industrial Societies and the Social Service League activities in the city of Madras.

The expenses incurred by the Central Home of the Society in Poona and its four branches exceed Rs. 45,000 a year and this amount is made up by contributions from Indians, rich as well as poor. The present number of workers enlisted by the Society is about 25, most of whom are University men of considerable standing. Besides, there is a large number of devoted associates.

President.—The Hon'ble Mr. V. S. Srinivasa Sastri, B A, L.T., Triplicane, Madras, Senior Member, Madras Branch, Mr Gopal Krishna Devdhar, M.A, Vice-President, Senior Member, Bombay Branch, Mr. Natesh Appaji Dravid, M.A, M.L.C., Senior Member, Central Provinces Branch, Mr. Hirdayanath Kunzru, B.A., B.S.C., M L C, Senior Member, Upper India Branch, Mr. A. V. Patwardhan, B A., Senior Member, Business Branch, Poona. Messrs. Joshi, Kunzru and Vaze together with the senior members constitute the Council of the Society with the Hon ble Mr. Sastri as its President. Mr. Anant Vinayak Patwardhan is the Secretary of the Council and also of the Society. Six young men, nearly all graduates, have been admitted this year on probation.

SEVA SADAN.—The Seva Sadan Society was started on the 11th of July, 1908, by the late Mr. B. M. Malabari. It is the pioneer Indian ladies' society for training Indian sisters ministrant and serving (through them) the poor, the sick and the distressed. The society has a habitation in Gamdevi, Bombay. One-half of the Building and Endowment Fund of Rs. 82,000 has been spent mainly in building at Gamdevi, and partly in the purchase of two acres of land at Santa Cruz for a "Sisters' Home" and other purposes

The Society maintains the following institutions for training its probationers and for doing its other work. 1. A home for the Homeless. 2. An Industrial Home with various departments. 3. A Dispensary for Women and Children. 4. Ashrams. 5. Free educational classes and a Library and Reading-room. 6. Home-Classes in the quarters of the poor, and normal classes for training Marathi women for the teacher's profession. All these are for the benefit of poor women. *Secretary,* Miss B. A. Engineer, M.B.E., M.A., LL.B.; *President,* Mrs. Ramabai Ranade, *Hon. Gen. Secretary,* the Hon. Mr. Lalubhai Samaldas, C.I.E., *Treasurers,* Sister Sushilabai and the Hon'ble Mr. Lalubhai Samaldas; *Trustees,* Sir Narayan Chandavarkar, Sir Bhalchandra Krishna, Sir V. D. Thackersey, the Hon. Sir G. K. Parekh and the Hon. Mr. Lalubhai Samaldas, C.I.E.

CONSUMPTIVES' HOME SOCIETY.—This Society was started by the late Mr. B. M. Malabari on the 1st of June 1909 It was registered under Act XXI of 1860. Mr. Malabari secured a large grant of land in a Himalayan pine forest in Dharampur (Simla Hills) from H. H. the Maharaja of Patiala, for a Sanitorium for Consumptives. His Highness also gave a donation of Rs. one lakh The Sanitorium has its special water works known as the Lady Hardinge Water Works, presented by the late Sir Chinubhai Madhav lal, Bart. of Ahmedabad. The Sanitorium has a Guest House: The Noshirwan Adul Guest House for visitors to Dharampore. It has accommodation for 75 patients. The Sanitorium was started on June 1, 1909, and has been in existence ever since. Mr. Malabari collected an Endowment Fund of about Rs 67,000 lodged with the Treasurer, Charitable Endowments, under Act VI of 1890. Nearly Rs. 1,37,000 have been spent on buildings, etc., and the current annual expenditure is about Rs. 34,000. Capt. R. B Spencer, M B B.S, is in charge of the Sanitorium. The office of this Society is situated at the Seva Sadan Buildings, Gamdevi, Bombay.

SOCIETY FOR THE PROMOTION OF NATIONAL EDUCATION.—This Society stands for an Indian education for Indian boys and girls, its general policy being embodied in "Principles of Education" by Mrs. Besant. *Treasurer and Registrar* :—D. K. Telang, Adyar, Madras.

SOCIETY FOR THE PROTECTION OF CHILDREN IN WESTERN INDIA.—*Office and Refuge :* Girgaon Back Road, Bombay.

Founded.—To prevent the public and private wrongs of children and the corruption of their morals; to take action for the enforcement of the laws for their protection, and, if necessary, to suggest new laws or amendments of the existing laws; to provide and maintain an organisation for these objects; and to do all other lawful things incidental or conducive to the attainment of the foregoing objects.

Subscription for annual membership, Rs. 10; for Life Membership, Rs. 100.

Honorary Secretaries : Mr. Mahomedbhoy Currimbhoy, Mr. N. V. Mandlik, B.A., LL.B., Mr. R. P. Masani, M.A.

WEST OF INDIA ANGLING ASSOCIATION.—The Association was started in 1912 at Poona, the head-quarters were transferred to Bombay in 1915, and the membership has increased considerably since then. The rights for stocking, preserving and angling in Lake Sydenham at Walwhan, near Lonavla, have been obtained by the Association from the Tata Hydro-Electric Power and Supply Co. and a commencement has been made with stocking the lake with sporting fish which as far as can be ascertained are doing well. Bottom fishing for indigenous fish is only allowed at present but it is hoped that the lake will be open this year for fly fishing and spinning. A journal is published which contains articles on fishing, experiences in the rivers and lakes and on the coasts of India,

the sporting fishes of the country and notes of general interest to Indian anglers.

Entrance fee Rs. 15. Annual subscription Rs. 10. *Patron*, H. E. Lord Willingdon. *President*. E. Comber, *Hon. Secretary*: G. V. E. Wesche-Dart, Bombay Club, and *Hon. Treasurer*: G. B. Adamson, C/o Russo-Asiatic Bank, Bombay.

MEN'S INDIAN ASSOCIATION.—This Association was started in Adyar, Madras, in 1917, with aims of service to women similar to those of the Seva Sadan in Bombay. In four years it has been able to start branches in 48 different towns and it has now 2,000 members. It establishes classes, meeting places, and regular lecture programmes for women in each of these branches. Each branch is autonomous and works according to the need of the locality. Classes are held to teach the vernaculars, English, needle-work—plain and fancy—first-aid, rattan-work and music. Weekly lectures are given on subjects of general interest relating to women such as health, education, religion, civic responsibilities, woman suffrage, etc. Though started entirely as an educational institution, the movement for the Reform Bill proved that a most necessary part of work for the advancement of woman was propaganda in support of woman suffrage. Accordingly the gaining of the vote for women was added to the objects of the Association and the Association specialises on woman suffrage and the removal of sex disqualification from all franchises and candidatureship for local boards, municipal and legislative councils. Valuable work along these lines has been done by the Association as this is the only woman suffrage organisation in India. The Association publishes a monthly magazine, *Stri-Dharma*, in English with Tamil and Telugu articles. (Rs. 4 to non-members, Rs 3 to members). It is an all-India Association. Its largest branch is in Bombay, its greatest number of branches in South India, but yearly more branches are being started in other provinces, and there are flourishing branches as far north as Gwalior and Lashkar. The prospects of rapid growth of the Association are very bright as it has been found that women everywhere welcome the self-development which the establishments of these branches brings.

Objects :—

To present to women their responsibility as daughters of India.

To help them to realise that the future of India lies largely in their hands; for as wives and mothers they have the task of training and guiding and forming the character of the future rulers of India.

To secure for women the vote for Municipal and Legislative Councils as it is or may be granted to men.

To secure for women the right to be elected as members on all Municipal and Legislative Councils.

To band women into groups for the purpose of self-development, education and for the definite service of others.

Headquarters : Adyar, Madras. *President*—Mrs. A. Besant. *Hon. General Secretary*—Mrs. Jinarajadasa. *Joint Secretary*—Mrs. M. E. Cousins, B. Mus.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION OF INDIA, BURMA AND CEYLON.—This was started in India in an organized and National way in 1896. The aim of the Association is to meet the needs of the girls and women who live in India from an Intellectual, Spiritual, Social and Physical standpoint. This is done in many ways in the local Associations that now flourish under the auspices of the National Young Women's Christian Association. The Associations in the big cities have a large membership and include all classes of the community. Clubs, Classes, Lectures, Commercial Courses, Music, Languages, Bible and Mission Study, Social Intercourse, Physical Training, and all kinds of physical recreation are carried on as need arises in these City Associations. Boarding Homes are established in all the principal cities where teachers, nurses, business girls, students, apprentices, etc., can have a comfortable home with good wholesome food and congenial companionship for a sum based on their wages. Travellers' Aid work is done and many travellers, especially in the port cities, find accommodation as they pass through. Employment is also found for women and girls. A useful feature of the Association is the Holiday Homes that are conducted in the hills, where girls from the plains can find inexpensive accommodation and regain health and strength. Some of the homes accommodate as many as forty-five at one time and hundreds benefit during the season. The work of the Association in the large cities is managed by a staff of Y. W. C. A. Secretaries, who are fully trained and equipped to meet the many demands that are made on them. These Secretaries are supplied from America, Britain, Australia, Canada and India.

Many of the Associations are in small up-country stations where a handful of members constitute the Branch, led by some lady in the station who is glad of this opportunity for service. The members of these small stations may be transferred, in the ever-changing life of India, into the larger cities and then they learn in a fuller way what the Association can do to help them in all-round development. In addition to the work of the City Department described above, the student department (which is affiliated to the World's Christian Student Federation) has branches in schools and colleges, while the Vernacular Department is carrying on valuable work in co-operation with Missionary societies in five different languages. The National Headquarters are in Calcutta. The inter-denominational character of the Association is clearly kept in the forefront and ladies of many Christian denominations are on the Committee. The National Committee consists of resident and non-resident members, representative of the City, Student and Vernacular Departments in various sections of the country.

The Patroness of the Association is H. E. Lady Chelmsford, who is also President of the Simla-Delhi Branch. On November 1st, 1920, a Training school for secretaries recruited in India, Burma and Ceylon was opened in Calcutta, with a strong staff (resident and non-resident) of lecturers on the Bible, Christian Doctrine, Economics, Religious Psychology and

Pedagogy, History and current movements in India, Association administration and Hygiene Recreation.

Copies of the annual report and other printed matter can be obtained from the National Office which is at 5, Russell Street, Calcutta. The Official Organ of the Association is "Woman's Outlook in India," an illustrated monthly magazine, which supplies women living in India with a good review at the price of Rs. 2-0-0 post free a year.

YOUNG MEN'S CHRISTIAN ASSOCIATION.—This Association, which was founded by the late Sir George Williams on June 6, 1844, seeks to unite those young men who, regarding Jesus Christ as their God and Saviour according to the Holy Scriptures, desire to be His disciples, in their doctrine and in their life, and to associate their efforts for the extension of His kingdom among young men. The above is known as the "Paris Basis" and it is world-wide. It was adopted at the first World's Convention in Paris in 1855 and re-affirmed at the Jubilee World's Convention in Paris in 1905. The Triennial National Convention of Y. M. C. A.'s of India, Burma and Ceylon adopted this in November 1920. The aim of the Association is through its religious, social, educational, and physical work to answer the fourfold—spiritual, social, mental and physical—needs of young men, and its policy is one of intense loyalty to the Church.

There are, as a rule, two classes of members. Any young man who subscribes personally to the "Paris Basis" may be an active or voting member and any young man of good character may be an associate.

The Young Men's Christian Association though relatively new to India, is spreading rapidly. The local Associations are autonomous and governed by local Boards of Directors. These Associations in convention elect a National Council of European and Indian laymen, who are responsible for the supervision and expansion of all forms of the Association work. Both the National Council and the local Associations employ specially trained full time Secretaries. One hundred and seven out of 172 Secretaries are Indians and are supported from funds raised in India and Ceylon. The remaining Secretaries are supported by the Associations of North America, Australasia, and Great Britain, but their work is directed by committees in India, to whom their services are loaned. The first paid Secretary came to India over thirty years ago, in response to an appeal from Madras. Soon afterwards the National Council was organised, and has become increasingly an indigenous institution.

There are now approximately 250 Associations with 12,000 members. Of these about one-eighth are Europeans and seven-eighths are Indians, of whom over two-thirds are non-Christians. The following Associations own one or more buildings which serve as the local headquarters :—Allahabad, 3 ; Bangalore, 6 ; Alleppey, 1 ; Bombay, 6 ; Calcutta, 6 ; Calicut, 2; Coimbatore, 1 ; Colombo, 1; Galle, 1; Hyderabad, 2; Jubbulpore, 2 Kandy, 1 ; Karachi, 2; Kunnamkulam, 1; Kottayam, 1 ; Lahore, 2; Madras, 4; Maymyo, 1; Nagpur 2 ; Naini Tal, 1; Palamcottah, 1; Poona, 2 ; Rangoon, 4 ; Secunderabad, 1 ; Simla, 1 ; Ootacamund, 1 ; Wellington, 1 ; Delhi, 1 , Dinapore, 1 ; Ferozepore, 1 ; Jaffna, 1 ; Jhansi; 1 ; Madura, 1 ; 1 ; Murree, 3 ; Midnapore, 1 ; Poona, 2 ; Risalpur, 1.

In Addition to buildings owned by the Association, bungalows have been rented to serve as headquarters in the following stations:—Colombo, 4; Hyderabad, 1; Jamalpur, 1; Jubbulpore, 1; Lahore, 2; Lucknow, 1 ; Madras, 1; Multan, 1; Poona, 1; Rangoon, 1 ; Kirkee, 1 ; Matale, 1 ; Maymyo, 1 ; Nowshera, 1.

The Association also has rent-free quarters in stations as follows :—

Bombay, 1 ; Calcutta, 3 ; Darasamand, 1 ; Delhi, 6; Ferozepore, 5; Jhansi, 2; Jullunder, 1; Karachi, 1; Kohat, 4 ; Lahore, 1; Lucknow, 4; Madras, 2 ; Nowshera, 1 ; Secunderabad, 2 ; Trichinopoly, 2 ; Trivandrum, 1.

The departments of the National Council are Student, Rural, Literary, High School, Architectural, Publication, Physical, British Army, Indian Army, Revenue, Publicity, Lecture, Business, Religious Work. The Student Christian Association is an independent movement affiliated to the National Council and has branches in more than two score colleges. The Rural Department is organising village Y. M. C. A.'s and co-operative credit societies and promoting cottage industries in over 200 centres. The Literary Department of which Dr. J. N. Farquhar is Senior Secretary, endeavours to promote a proper and sympathetic understanding of the non-Christian religions and show their relationship to Christianity. At the beginning of the war there were but three Army Associations and five Army Secretaries in the whole of India. Now Association privileges are provided for British and Indian Troops in 37 cantonments under the direction of seventy Secretaries and Assistants. In addition to organising school boys' Y. M. C. A.'s the High School Department arranges for holiday camps for boys and High School teachers. The National Council employs its own architects who plan and construct its buildings, hostels, and playgrounds. The Physical Department specialises on physical education and is promoting the playground movement. A National Training School is established at Bangalore for the training of Indian Secretaries.

The "Association Press" is the Publication Department. A monthly magazine, the YOUNG MEN OF INDIA, is issued, and many books and pamphlets, both on Association subjects and on those of more general interest. Some of the latter, *e.g.*, the Heritage of India Series, have been issued in conjunction with the Oxford Press.

The Headquarters of the National Council is 5, Russell Street, Calcutta. The officers are :—

Patron :—His Excellency Lord Reading, Viceroy and Governor-General of India.

Chairman :—K. Mathan, Esq., (Mysore Civil Service).

Chairman of Executive :—The Hon'ble Mr. Justice W. E. Greaves, Bar.-at-Law.

Treasurer:—H. A. F. Lindsay, Esq., C.B.E., I.C.S., 1, Council House Street, Calcutta.
General Secretaries:—K. T. Paul, and F. V. Slack.

The Bombay Association now possesses four well-equipped buildings:—Wodehouse Road, Lamington Road, Rebsch Street, and Reynolds Road. The President is the Hon'ble Mr. G. Carmichael, C.S.I., I.C.S., and the General Secretary is Mr. Conyers Baker. In connection with each building there is a well managed hostel, one for Anglo-Indian apprentices, one for Indian students, one primarily for European business men, and one for Indians. The Elton Hockey Tournament and the Condor Tennis Tournament are held annually under the auspices of the Bombay Association.

ASSOCIATION OF BRITISH UNIVERSITY WOMEN IN INDIA.

The Association of British University Women in India was established in 1913. Its objects are:—

(1) To facilitate intercommunication and co-operation between women belonging to the universities of the United Kingdom, resident in India.

(2) To provide a means of keeping in touch with the universities of the United Kingdom, by communication with the Federation of University Women, and otherwise as may seem expedient.

(3) To act as an organisation which shall afford opportunity for the expression of united opinion and for concerted action by university women on matters especially affecting them.

Membership is open only to those women who hold degrees in any university in the United Kingdom, or hold Oxford or Cambridge Honours Certificates. But as it was soon felt that a Society to include the many graduate women in India who have graduated elsewhere than in the United Kingdom, was desirable and could do useful work, a kindred association, to include Indian and Colonial graduates, promptly sprang into existence in Bombay. This association is confined to Bombay Presidency and is known as the **Bombay Presidency Women Graduates' Union.**

Joint Secretaries—Miss Rustomjee, 162, Hornby Road, and Miss Natarajan, Pali Hill, Bandra.

The Association of British University Women has four branches. The addresses of the Honorary Secretaries are as follows:—

Hony. General Secretary.—Miss C. Sorabji, 9, Army and Navy Chambers, Calcutta.

Hony. Local Secretaries.

Bombay	..Mrs. McKenzie, Wilson College House.
Calcutta	..Miss Alton, 11, Chowringhee Mansions.
Delhi and Punjab	..Miss Harrison, Queen Mary's College, Lahore.
United Provinces	..Mrs. Daniels, Tehri Kothi, Lucknow.

The Delhi Branch came into existence in 1918. The United Provinces Branch is somewhat scattered. The Calcutta and Bombay Branches are influential, and have repeatedly intervened with good effect to educate public opinion with regard to subjects affecting women. They have, for instance, made investigations on behalf of the Education Department, Government of India, the Calcutta University Commission, etc. They have been the means of introducing women on to University Senates and Municipalities. The Calcutta Branch carried through an important exhibition of Food Products with the double object of discovering:—

(1) What were the exact resources of the country.

(2) How firms and individuals could be induced to develop these resources, to find substitutes for imported goods and to improve existing methods of preparation of indigenous food products.

The most valuable part of the work of the Association has been the establishment of **Women's Employment Bureaux** in Calcutta and Bombay. The work of mobilising women has been difficult in every country, not for want of goodwill on women's part but for want of machinery and organisation. The Association of University Women realised that, as the only body of educated Englishwomen in this country, it was called upon to provide the necessary organisation. Bureaux were formed and were the means of (1) helping many employers to get into touch with the available reserve of women labour; (2) showing trained women where their services were most needed and (3) training inexperienced workers who had nothing but their goodwill to offer. The Bureaux have been remarkably successful. In its last month's working, the Bombay Bureau was able to place as many as 40 per cent. of its fresh applicants, but in June, 1918, it closed down as the National Service Bureau, a department of the War Purposes Board, Government of Bombay, was opened in order to mobilise more successfully the man-power of the Presidency.

As a means of promoting friendships between women from various parts of the United Kingdom, with widely differing tastes and interests and spheres of life in India, and as an instrument for affording opportunities for usefulness to educated women, the Association of University Women has a useful function to perform.

Federation of Indian University Women.—The Federation of Indian University Women was founded in Calcutta in July 1920. The effort was an outcome of the discovery that to find a common factor and co-operate upon that basis, was our best chance of achievement in a world which needed the work of women. The women of Great Britain made this discovery during the war when the British Universities Mission to America helped solve a large political problem, and the International Federation of University

Women has embodied the memory of that discovery in a Federation which aimed at including all the Universities of the world. It is in fact a League of Nations, in which the University is the unit. Most of the countries of Europe, America, Canada, China and Japan belong to this International Body. The Federation of Indian University Women is the Indian unit.

In the International Federation there are opportunities for better understanding and world-friendship, for admittance to the privileges of the International Federation, plans for the foundation of scholarships, for the care of students going to foreign countries, for the exchange of Lectureships, and other privileges as between country and in short the benefit of all attempts made to better the postion of women.

The aims and object of the Indian Federation are (1) To act as an organisation which shall afford opportunity for the expression of united opinion and for concerted action by University Women. (2) To facilitate intercourse and co-operation between University Women and maintain their interest in, and connection with, academic life. 3) To encourage post-graduate study, and to stimulate the interest of women in public life. The annual subscription is Rs. 2.

Membership is open to graduates of Indian Universities only: but a limited number (five in Calcutta) of women of other Universities may be admitted as Associate Members. During the one year of its existence, the Indian Federation has collected over 200 members, and has Branches in Bombay, Calcutta and Orissa. Other Branches are in process of formation.

The aim of the Federation is to have Branches eventually in all Indian University Towns- Members in Districts belonging to the nearest branch

OFFICE-BEARERS FOR 1921-22.

Bombay—	*President*	Miss Mistri, L. M. & S.
	Secretary	Miss Rustomjee, M A, 162, Hornby Road, Fort, Bombay.
Calcutta—	*President*	Mrs. P Chaudhuri.
	Secretary	Miss Chatterjee, 2, Wood Street, Calcutta.
Orissa—	*Secretary*	Miss C. Roy, Ravenshaw Girls' School, Cuttack.

PRINCIPAL CLUBS IN INDIA.

Name of Club.	Established	Club-house	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
			Rs.	Rs.	Rs.	
ABBOTTABAD ..	..	Abbottabad, N. W. F. Provinces.	16	..	10	Lt. A. G. Mayhew.
ADYAR	1890	Madras	75	12	6	H. Webster.
AGRA	1863	Agra Cantonment ..	50	..	11	Capt. A. Catling.
AHMEDNAGAR ..	1889	.....	32	..	11	Lt.-Col. C. Maddock S.M.S.
AIJAL	1893	Lushai Hills, E. B. & Assam.	32	..	20	C. H. Bell.
AJMERE	1883	Kaiser Bagh	100	..	12	R. D. Harrison.
AKOLA	1870	Berar	100	12	15	G. F. Squire.
ALLAHABAD	1868	Allahabad	100	10	12	R. N. Marsh-Smith.
AMRAOTI		.....	100	..	13	W. A. Forbes.
AMRITSAR	1894	Amritsar	20	..	7	H. G. Lee.
BANGALORE, UNITED SERVICE.	1868	38, Residency Road ..	..	..	9	..
BAREILLY	1883	Municipal Gardens ..	50	..	9	John Stalkartt.
BARISAL	1864	Backergunj, Barisal ..	32	..	12	Dr. H. A. Young.
BARRACKPUR	1850	Grand Trunk Road, S. Riverside.	48	..	10	S. A. Fairweather.
BASSEIN	1881	Fytche Street, Bassein, Burma.	50	..	11	.....
BELGAUM	1884	Close to Race Course ..	50	..	10	Maj. R. J. K. Pott.
BENARES	..	.....	20	..	16	O. J. Gardner.
BENGAL	1827	33, Chowringhee Road, Calcutta.	300	25	16	.....
BENGAL UNITED SERVICE.	1845	29, Chowringhee Road.	150	20	14	T. S. Sterling.
BOMBAY	1862	Esplanade Road ..	200	12	8	W. F. Murdoch.
BOMBAY GYMKHANA ..	..	.....	75	12	7	J. Sheepshanks.
BYCULLA	1833	Bellasis Road, Bombay	350	12	10	B. D. Barnes.
CALCUTTA	1907	13, Russell Street ..	100	120	10	Darcy Lindsay, C.B.E. and B. N. Sircar.
CAWNPORE	1844	Cawnpore	100	..	10	Capt. O. G. Edwards.
CHAMBA	1891	Dalhousie, Punjab ..	..	15	7	Capt. W. P. Cole.
CHITTAGONG	1878	Pioneer Hill, Chittagong.	75	12	10	J. A. Stein.
CLUB OF CENTRAL INDIA.	1885	Mhow	50	..	10½	Lt.-Col L. F. Wylde, O.B.E.
CLUB OF WESTERN INDIA.	1865	Elphinstone Road, Poona.	200	6	6	W. B. Trevenen.
COCHIN	1876	.....	100	18	7½	J. C. Burton.
COCONADA	1856	Coconada	70	..	10	S. A. Cheesman.
COIMBATORE	1868	Coimbatore	50	..	10	.....
COONOOR	1894	Coonoor Nilgiris ..	100	..	8	C. R. Clayton-Dauberny.
DACCA	1864	Dacca	50	..	12	.....
DARJEELING	1868	Auckland Road ..	70	12	6	Vacant.
DELHI	1898	Ludlow Castle, Delhi ..	120	..	10	F. C. A. Thompson.

Name of Club.	Established.	Club-house.	Subscription. Ent.	Annual	Monthly.	Secretary.
			Rs.	Rs.	Rs.	
HIMALAYA	1841	Mussoorie	100	5	12	W. Bell.
JHANSI	1887	Next to Public Gardens, Jhansi.	50	..	10	L. Bigg-Wither.
MADRAS	1831	Mount Road, Madras..	250	20	8	Capt. W. B. F. Davidson (on leave.) ; A.F. Davis (Actg.).
MADRAS COSMOPOLITAN.	1873	Mount Road	100	60	..	Rao Saheb M. C. T. Muthiah Chetty.
MALAPAR	1864	Beach Road, Calicut..	50	6	10	.....
MAYMYO	1901	.....	100	12	10	G. Scott Higgins.
MOOLTAN	1892	Mooltan	15	..	12	Major H. V. Reynolds, I.A.
NAINITAL	1864	.....	100	12	10	Major A. E. Browne.
OOTACAMUND. ..	1840	Ootacamund, Nilgiri Hills.	150	12	10	S. E. Langmore.
ORIENT	..	Chowpaty, Bombay .	150	72	6	C. N. Wadia, C.I.E. and C.R. Watkins.
PEGU	1871	Prome Road, Rangoon	150	12	12	Francis H. Tod.
PESHAWAR .. .	1883	Peshawar .. .	50	..	10	Lt.-Col D. Mathers, D.S.O., O.B.E.
PUNJAB	1879	Upper Mall, Lahore ..	150	15	12	A. R. Ross Redding.
QUETTA	1879	Quetta..	80	..	7	. ....
RANGOON GYMKHANA..	1874	Halpin Rd., Rangoon.	75	6	7	W. B. Clover.
RANGOON BOAT CLUB..	..	Royal Lakes, Rangoon	48	..	3	C. M. W. de Facien.
RAJPUTANA	1880	Mount Abu	50	..	8	.....
ROYAL BOMBAY YACHT CLUB.	1880	Apollo Bunder ..	350	18	8	Major Wells.
ROYAL CALCUTTA TURF CLUB.	1861	49, Theatre Road ..	150	25	12	Capt. A. Howard.
ROYAL WESTERN INDIA GOLF CLUB.	..	Nasik	75	15	12	A. C. Owen.
SATURDAY	..	7, Wood Street, Calcutta	75	12	7	H. Carey Morgan.
SECUNDERABAD ..	1883	Secunderabad(Deccan)	100	96	8	Capt. W. S. Hooker.
SHILLONG	1878	Northbrook Road, Shillong.	50	..	20	C. H. Holder, O.B.E.
SIALKOT	..	Sialkot, Punjab ..	32	..	14	Capt. F. J. Gibbs.
SIND	1871	Karachi	200	12	9	W. M. Maud.
TRICHINOPOLY ..	1869	Cantonment	90	12	12	C. Davis.
TUTICORIN	1885	Tuticorin	50	..	13	Thomas Logie.
UNITED SERVICE CLUB.	1866	Simla	200	12	15	Major L. B. Grant.
UNITED SERVICE CLUB, LUCKNOW.	1861	Chutter Manzil Palace.	100	12	12	U. C. Sandys
UPPER BURMA ..	1889	Fort Dufferin, Mandalay.	50	12	10	Major W. R. James, M.C.
WESTERN INDIA TURF.	..	Bombay and Poona ..	50	15	..	Major J.E. Hughes.
WILLINGDON SPORTS	1917	Clerk Road, Bombay..	300	120	..	C. H. Bull.
WHEELER	1863	The Mall, Meerut ..	50	..	10	Major A. W. Chisholm.

The Church.

In the ordinary acceptance of the term there is no established Church in India. An Ecclesiastical Establishment is maintained for providing religious ministrations, primarily, to British troops, secondarily to the European civil officials of Government and their families. Seven out of the eleven **Anglican Bishops** in India are officers of the Establishment, though their episcopal jurisdiction far transcends the limits of the Ecclesiastical Establishment. The stipends of the three Presidency Bishops are paid entirely by Government, and they hold an official status which is clearly defined. The Bishops of Lahore, Lucknow, Nagpur and Rangoon draw from Government the stipends of Senior Chaplains only but their episcopal rank and territorial titles are officially recognised. The Bishops of Chota Nagpur, Tinnevelly-Madura, Travancore-Cochin, Dornakal and Assam are not on the establishment. The new Bishopric of Assam was created in 1915. In its relations with Government it is subordinate to the see of Calcutta. But the maintenance of the Bishopric is met entirely from voluntary funds.

The **ecclesiastical establishment** includes four denominations—Anglican, Scottish, Roman and Wesleyan. Of these, the first two enjoy a distinctive position, in that the Chaplains of those denominations (and in the case of the first-named the Bishops) are individually appointed by the Secretary of State and rank as gazetted officers of Government. Throughout the Indian Empire there are 134 Anglican and 18 Church of Scotland chaplains whose appointments have been confirmed. The Roman Catholics and Wesleyans receive block-grants from Government for the provision of clergy to minister to troops and others belonging to their respective denominations. The Wesleyan Methodist Church has a staff of military chaplains in India who receive a fixed salary from Government and 25 chaplains working on a capitation basis of payment by Government. Churches of all four denominations may be built, furnished and repaired, wholly or partly at Government expense.

In the Anglican Communion a movement towards **Synodical Government** was making great progress, when, in the course of the year 1914, serious legal difficulties were encountered The Bishops were advised that their relations with Canterbury and the Crown precluded the establishment of synods on the basis adopted by the Anglican Church in America, Japan, South Africa and other countries where it is not established by the State. It is stated that in course of time those relations may be modified so as to admit of the establishment of synodical government in India. Meanwhile Diocesan Councils are being adopted as a make-shift measure. These Councils possess synodical characteristics, but are devoid of any coercive power.

They have been constituted in all the individual dioceses, but the attempt made in 1920 to round off the system by the formation of a Provincial Council failed. Delegates from all the dioceses except Madras were sent to a Provincial Assembly at Calcutta. Madras abstained on the ground that India is too vast a country to be organised as one Province of the Church, and that there ought to be at least two Provinces, a Northern and a Southern. The Assembly, because the absence of Madras delegates caused it to have less than complete Provincial authority, refrained from resolving itself into the First Provincial Council of the Anglican Church in India. There is, however, good reason to hope that the objection of the Madras diocese has been overcome, and that the conciliar system of Church government will be completed by the formation of a Provincial Council early in 1922.

So far as the European and Anglo-Indian communities are concerned the activities of the Church are not confined to public worship and pastoral functions. The **education** of the children of those communities is very largely in the hands of the Christian denominations. There are a few institutions such as the La Martiniere Schools, on a non-denominational basis; but they are exceptional. In all the large centres there exist schools of various grades as well as orphanages, for the education of Europeans and Anglo-Indians under the control of various Christian bodies. The Roman Catholic Church is honourably distinguished by much activity and financial generosity in this respect. Her schools are to be found throughout the length and breadth of the Indian Empire; and they maintain a high standard of efficiency. The Anglican Church comes next, and the American Methodists have established some excellent schools in the larger hill-stations. The Presbyterians are also well-represented in this field, particularly by the admirable institution for destitut children at Kalimpong, near Darjeeling. Schools of all denominations receive liberal grants-in-aid from Government, and are regularly inspected by the Education Departments of the various provinces. Thanks to the free operation of the denominational principle and its frank recognition by Government, there is no "religious difficulty" in the schools of the European and Anglo-Indian communities

Christian Missions.

The tradition that St. Thomas, the Apostle was the first Christian missionary in India is by no means improbable. History, however, carries us no further back than the sixth century, when a community of Christians is known to have existed in Malabar. Since then the so-called **Syrian Church** in south-west India has had a continuous life. Except in its infancy this Church (or rather these Churches for the Syrian Christians are now divided into four communions) has displayed little of the missionary spirit until quite recent times. Western Christianity was first introduced into India by the Portuguese, who established their hierarchy throughout their sphere of influence, Goa being the metropolitical see of the Indies. St. Francis Xavier, a Spaniard by race, took full advantage of the Portuguese power in Western India to carry on his Christian propaganda. His almost super-human zeal was rewarded with much success, but many of the fruits of his labour were lost with

the shrinkage of the Portuguese Empire. It is really to the work of the missionaries of the **Propaganda** in the 17th century that the Papacy owes its large and powerful following in India to-day. The Roman Catholics in India number 1,904,006, of whom 379,251 were added during the decade 1901-1911. The total of "Syrian" Christians (exclusive of those who while using the Syrian liturgy, are of the Roman obedience) is 315,612, as against 248,741 in 1901. Protestant Christians (the term throughout this article includes Anglicans) number 1,636,731, an increase of 486,986 since 1901. Thus, the total number of Christians of all denominations in India is now close on four millions. In fact it probably exceeds that figure at the present moment, as these statistics are taken from the Census Report of 1911, and the rate of increase during the previous decade was nearly 100,000 per annum.

The Protestant Churches made no serious attempt to evangelise India till the beginning of the nineteenth century. They have thus been at work in the Indian mission field for something over 100 years, and the statistical results of their efforts are given above. It is now, however, generally recognised that Christian missions are producing indirect effects in India which lend themselves only incompletely to any sort of tabulation. The main agency of this more diffusive influence of Christianity is the missionary school and college. The **Protestant missions** fill a considerable part in the elementary education of the country. According to the *Year Book of Missions in India*, 1912, they are teaching 446,000 children in 13,204 elementary schools, mostly situated in villages. This represents one-ninth of the total of elementary schools and scholars throughout the Empire. The majority of children in these schools are non-Christians. The same is true also of the high schools and in a still greater degree of the colleges. The former number 283 with 62,600 male and 8,400 female pupils. There are 38 colleges affiliated to Universities, containing 5,488 male and 61 female students. Of these as many as 5,241 are non-Christians. From the standpoint of missionary policy much importance is attached to these agencies for the indirect propagation of the Christian faith. The statesman and the publicist are chiefly interested in the excellent moral effect produced by these institutions amongst the educated classes, and the higher educational ideals maintained by their staffs. The principal **University colleges** under Protestant auspices are the Madras Christian College; the Duff College, Calcutta; the Wilson College, Bombay; and the Foreman College, Lahore. All these are maintained by Presbyterian societies, either British or American. The Roman Catholics have a large number of educational institutions, ranging from small village schools to great colleges preparing students for University degrees. But the proportion of Christian students in their institutions is very much larger than in those of the Protestant bodies. The proportion of literates amongst native Roman Catholics is probably lower than amongst the Protestant converts; but compared with Hindus and Mahomedans it is conspicuously higher. The Roman Catholics have some 3,000 elementary schools in which 98,000 boys and 41,000 girls are receiving instruction. In middle and high schools they have 143,000 boys and 73,000 girls and in University colleges about 5,000 students of both sexes. These figures, however include a large proportion of Europeans and Eurasians, who are an almost negligible quantity in Protestant mission schools and colleges.

More recent, but producing even more widespread results, is the **Philanthropic work** of Christian missions. Before the great famine of 1878, missionaries confined themselves almost exclusively to evangelistic and educational activity. The famine threw crowds of destitute people and orphan children upon their hands. Orphanages and industrial schools became an urgent necessity. But the philanthropic spirit is never satisfied with one kind of organisation or method. A great stimulus was also given to medical missions. **Hospitals and dispensaries** have sprung up in all parts of the mission field; and leper asylums are almost a monopoly of Christian missionary effort. In 1911 the total number of medical missionaries working under Protestant societies in India was 118 men and 217 women, the majority of the former being also ordained ministers of religion. There are 184 industrial institutions in which 59 different arts and crafts are taught, ranging from agriculture to type-writing. In this department the **Salvation Army** hold a prominent place; and the confidence of Government in their methods has been shown by their being officially entrusted with the difficult work of winning over certain criminal tribes to a life of industry. The indirect effect of all this philanthropic activity under missionary auspices has been most marked. It has awakened the social conscience of the non-Christian public, and such movements as "The Servants of India" and the mission to the Depressed Classes are merely the outward and visible sign of a great stirring of the philanthropic spirit far beyond the sphere of Christian missionary operations.

Reunion.—For very many years Indian Christians have shown that they felt much more acutely than Europeans the scandal and disadvantage of the divisions of Christendom. These divisions are due to a very much greater extent than is always recognised to political causes, and in the political conflicts of the sixteenth and seventeenth centuries, when they became crystallised, India had no part. Even those differences amongst Christians which have a purely religious origin and foundation seem to be of very little account to Indian converts. For them the great dividing line is that between Christ and Mahommed or Shiva and Vishnu. Standing before a background of paganism they are conscious of a real fundamental unity in Christ. Compared with the greatness of the gulf which separates Christian from non-Christian, the differences of "confession" and "order" which separate Christian from Christian seem to be wholly artificial and negligible. In consequence the reunion movement, which is noticeable all over the world, is nowhere so strong as in India.

In South India it has already resulted in the formation of the South India United Church, which is a group union of five of the principal Protestant communions, and as these bodies are in communion individually with all, or almost all, the other Protestant bodies at work in India the Union may be regarded as a Pan-Protestant Union. The S.I.U.C. is at present negotiating with the Anglican Church. If as seems probable the negotiations are successful the result will amount to a union of all the Christian bodies in South India, except the Roman Catholics, on the basis of the last Lambeth encyclical This will mean that a real National Indian Church will come into being. Although it will be tolerant of almost every expression of Evangelical opinion and will retain the freedom of development characteristic of Protestantism, by its acceptance of the Catholic creeds and the Historic Episcopate, it will be linked up with the Catholic tradition of the Anglican Church.

Anglican Missionary Societies.

The Church Missionary Society carries on work in India in seven different missions—the United Provinces, South India, Travancore and Cochin, Bengal, Western India, Punjab and Sind and the Central Provinces and Rajputana. The names are in order of seniority. Work was begun in what are now called the United Provinces in 1813, in Bombay in 1820, in the Punjab in 1851, and in the Central Provinces in 1851. The Society has always kept Evangelistic work well to the fore; but it also has important medical missions, especially on the N.-W. Frontier, and many schools of the Primary, Middle and High standards. The Church of England Zenana Missionary Society is an offshoot of the C. M. S. controlling the work of 162 missionary ladies. The number of ordained European missionaries of the C. M. S. in India and Ceylon is 160, European laymen 30 and European laywomen 258. The Society claims a Christian community of 2,21,359 of whom 63,655 are adult communicants.

Society for the propagation of the Gospel. Statistics of the work of this Society are not easily ascertained, as much of it is done through Diocesan institutions, which, while financed and in many cases manned by the S. P. G., are entirely controlled by the Diocesan authorities. The best known of the S. P. G. missions is that at Delhi, commonly called the Cambridge Mission to Delhi, carrying on educational work at St. Stephen's College and School. At the College there are about 200 students under instruction, and at the High School 800. The College hostels accommodate 100 students. Missions to the depressed classes exist in Burma, in the Ahmednagar District and in several parts of South India, especially in the Diocese of Tinnevelly-Madura. There are 1,16,000 Indian Christians under the ægis of the S. P. G.; 90 ordained European missionaries and 98 European lady workers.

Other Anglican Societies.—The Oxford Mission to Calcutta was started in 1880. It works in the poorest parts of Calcutta and also at Barisal. There are 11 mission-priests of this Society, and 16 Sisters. In addition to its work amongst the poor, the Oxford Mission addresses itself to the educated classes in Bengal and issues a periodical called *Epiphany*, which is known all over India.

The Society of St. John the Evangelist (commonly known as the Cowley Fathers) has houses at Bombay and Poona, and small stations in the Bombay Konkan. In Bombay its missionary work centres round the Church of Holy Cross, Umarkhadi, where there is a school and a dispensary. The Christians are chiefly drawn from the very poorest classes of the Bombay population. At Poona the Society co-operates with the Wantage Sisters and in Bombay with the All-Saints' Sisters. Other Anglican sisterhoods represented in India are the Clewer Sisters at Calcutta and the Sisters of the Church (Kilburn) at Madras. The St. Hilda's Deaconesses' Association of Lahore carries on important educational work (chiefly amongst the domiciled community) in the Punjab. The mission of the Scottish Episcopal Church at Nagpur, the Dublin University Mission at Hazaribagh, and the Mission of the Church of England in Canada working at Kangra and Palampur (Punjab) should also be mentioned under the head of Anglican Missions.

Bengal Ecclesiastical Department.

Westcott, The Right Reverend Foss, D.D. ..	.. Lord Bishop of Calcutta and Metropolitan of India.
SENIOR CHAPLAINS.	
Stokoe, Rev. Cecil George, M.A.	.. Services placed at the disposal of the Government of the Punjab.
Firminger, Ven'ble Walter Kelly, M.A., B.D..	.. Archdeacon of Calcutta.
Dyer, Rev. Basil Saunders, B.A.	.. (On leave.)
Keeling, Rev. Ernest William Phillips, B.A.	.. (On leave.)
Drawbridge, Rev. W. H., M.A.	.. St. John Church, Calcutta.
Parker, Rev. William Almair Hedley ..	.. Services placed at the disposal of the Government of Punjab.
Crozier, Rev. Philip Horsefall	.. Dum Dum and Barrackpore.
Penley, Rev. Horace Octavius, M.A. ..	.. St. James' Church. Calcutta.
Ridsdale, Rev. Arthur Cyril	.. Services placed at the disposal of the Governsment of Bihar and Orissa.
Godber, Rev. John	.. St. Paul's Cathedral, Calcutta.

And 12 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Thomson, Rev. William, M.A. .. .. .. (On leave.)
Gordon, Rev. James Drummond, M.A. .. .. Offg. Presidency Senior Chaplain, Bengal, and Senior Chaplain, St. Andrew's Church, Calcutta.
Ingram, Rev. James William, B.D. .. .. .. Senior Chaplain, St. Andrew's Church Calcutta.
McLean, Rev. Lachlan, M.A., B.D. .. .. .. Under Army Department.

CHAPLAINS OF THE CHURCH OF ROME.

Meuleman, The Most Reverend Dr. Brice, S.J. .. Archbishop, Calcutta.
Carbery, Rev. Fr. Philip, S.J. .. .. .. Chaplain, Alipore Central Jail.

Bombay Ecclesiastical Department.

Palmer, Right Reverend Edwin James, M.A. .. Lord Bishop of Bombay.
Hatchell, Ven'ble C. F. W. .. .. Archdeacon of Bombay.
Smith, Arthur Kirke .. .. Registrar of the Diocese.

SENIOR CHAPLAINS.

Foote, Rev. Harold .. .. (On leave.)
D'Alessio, Rev. Edward Samuel John, P.A. .. .. Dharwar.
Mould, Rev. Horace .. .. (On furlough.)
Kennelly, Rev. W. J. M. .. .. .. St. Paul's Church, Poona.
Tibbs, Rev. Philip Gordon, B.A. .. .. .. Kirkee.
Arnould, Rev. Henry Lloyd M.H. .. .. .. St. Mary's, Poona.
Hill, Rev. Edward Eustace .. .. .. Senior Presidency Chaplain, Bombay.

And 16 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Matthew, Rev. John Crombie, M.A., B.D. .. .. (On furlough.)
Cant, Rev. Alan, M.A. .. .. Presidency Senior Chaplain (On leave.)
Gordon, Rev. J. D., M.A., B.D., B.SC .. .. Under Government of India
Macfarlane, Rev. Andrew, M.A., B.D. .. .. Ditto.
Nelson, Rev. A. M. .. .. Acting Presidency Senior Chaplain and Chaplain, St. Andrew's Church, Bombay.

And 2 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF ROME.

Goodier, The Most Rev. A. .. .. Presidency.

Madras Ecclesiastical Department.

Whitehead, Right Reverend Henry, D.D. .. Lord Bishop of Madras.
Cov. Ven'ble Lionel Edgar, M.A. .. .. .. Archdeacon and Bishop's Commissary.
Nuttall, Rev. Frank, M.A. .. .. Ag. Archdeacon and Commissary in Charge of the Diocese and Senior Joint Chaplain, St. George's Cathedral.
Rowlandson, Frederic, B.A., LL.B. .. .. .. Registrar of the Diocese and Secretary to the Lord Bishop.

SENIOR CHAPLAINS.

Flynn, Rev. Hugh Hamilton .. .. Secunderabad.
Giles, Rev. Clement Douglas, M.A. .. .. .. (On leave.)
Heycock, Rev. Francis Wheaton, M.A. .. .. (On leave.)
Nuttall, Rev. Frank .. .. St. George's Cathedral.
Morton, Rev. Bertram Mitford .. .. .. On combined leave.
Stone, Rev. Henry Cecil Brough .. .. .. St. Thomas' Mount with Pallavaram.
Lowsley, Rev. W. Ashbel .. .. (On leave.)
Jervis, Rev. E. O. .. .. Holy Trinity Church, Bangalore.
Piers, Rev. S. O. .. .. Combined leave.
Bridge, Rev. Henry Noel .. .. Combined leave.
Proctor, Rev. Francis Owen .. .. Combined leave.
Wright, Rev. G. A. Arthur .. .. Coimbatore.
Sell, Rev. Charles Edward .. .. Under Government of India, Army Dept.
Smith, Rev. George C. Augustus .. .. .. Trimulgherry, Deccan.
Brownrigg, Rev. Ernest Graham, M.A. .. .. Coonoor
Boslase, Rev. J. J. D., B.A., LL.B. .. .. St. Mark's Church, Bangalore.
Loasby, Rev. Harry Clement, M.A. .. .. St. Mathias', Vepery.
Hacking, Rev. Henry, M.A. .. .. .. Under Government of India, Army Dept.

And 14 Junior Chaplains

CHURCH OF SCOTLAND.

Gillan, Rev. David Hedley, M.A., B.D. .. .. St. Andrew's Church, Madras (On leave)
McNeill, Rev. J. H. H .. .. Senior Chaplain, St Andrew's Church, Madras.
Phillip, Rev. James Gibson .. .. St. Andrew's Church, Bangalore (On leave)

Mitchell, Rev. James Donald, M.A., B.D. .. .. Chaplain, St. Andrew's Church, Madras.
Pitcairn Hill, Rev. Colin Cecil, M.A. .. .. Probationary, St. Andrew's Church, Secunderabad.

Assam Ecclesiastical Department.

Lee, Rev. P. E., M.A. .. .. Shillong.
Vacant .. .. Darrang.
Wylde, Rev. F. St. J Quinton .. .. .. Lakhimpur.

Ainsworth, Rev. H. W. .. .. Silchar.
Dixey, Rev. A. D. .. .. Sibsagar.

Bihar and Orissa Ecclesiastical Department.

JUNIOR CHAPLAINS.

Ridsdale, Rev. A. C. .. .. Chaplain, Cuttack.
Tambling, Rev. F. G. H. .. .. Dinapore and Bankipore.
Payar, Rev. R. .. .. Cuttack (Temporary).

Perfect, Rev. Henry .. .. Bhagalpur.
Gowenlock, Rev. Frederick .. .. Monghyr and Jamalpur.

Simmons, William John, B.A. .. .. .. Muzaffarpur and Darbhanga.
Whitley, Rev. Edward .. .. .. Ranchi.

Burma Ecclesiastical Department.

Fyffe, The Right Reverend Rollestone Sterritt, M.A., Lord Bishop of Rangoon.

SENIOR CHAPLAINS.

Seeley, Rev. George Henry .. .. (On leave.)
Ellaby, Rev. George Alfred, B.A. .. .. .. (On leave.)
Price, Rev. Howel Evans .. .. (On leave.)

And 7 Junior Chaplains.

Central Provinces Ecclesiastical Department.

Chatterton, Right Reverend E., D.D. .. .. Lord Bishop of Nagpur.
Martin, Ven'ble F. W. .. .. On combined leave.

SENIOR CHAPLAINS.

Clarke, Rev. W. L. .. .. Kamptee.
Mo'ony, Rev. P. J. .. .. Nee much.
Clough, Rev. E. R. .. .. Offg. Archdeacon of Nagpur

Wardell, Rev. A. F. G. .. .. Jubbulpore.
Carter, Rev. B. B., M.A. .. .. Saugor.

And 9 Junior Chaplains.

North-West Frontier Ecclesiastical Department.

SENIOR CHAPLAINS.

Cole, Rev. A. B. F. .. .. Abbottabad.
Henry, Rev. W. E. C., M.A. .. .. Kohat.

Dixon, Rev. T. H., M.A. .. .. (On leave.)
Carden, Rev. H. C. .. .. Peshawar.

And 2 Junior Chaplains.

Punjab Ecclesiastical Department.

Durrant, Right Reverend H. B., M.A., D.D. .. Lord Bishop of Punjab, Lahore.
Wheeler, The Ven'ble Cauffon High Trevor, M.A. .. Archdeacon.

SENIOR CHAPLAINS.

Muspratt, Rev. Walter, M.A. .. .. (On leave.)
Stewart, Rev. Charles, B.A. .. .. (On leave.)
Selwyn, Rev. Arthur Lewis Henry .. .. .. Dalhousie.
Cole, Rev. A. B. Farquharson .. .. Abbottabad.
Markby, Rev. F. E. .. .. Dalhousie Cantonment.
Borne, Rev. G. D., M.A. .. .. On Foreign Service.
Fagan, Rev. High William Farquharson .. .. (On leave.)
King, Rev. John Blakeney .. .. Karachi.
Buckwell, Rev. F. C. .. .. Offg. Archdeacon of Lahore.
Castle, Rev. W. W. .. .. (On leave.)
Stephenson, Rev. H. S. .. .. (On leave.)
Rintoul, Rev. Charles Randolph .. .. .. Murree nearer Gallis
Campbell, Rev. Rowland William .. .. .. Multan.
Maunsell, Rev. A. P. Gabbett .. .. .. Lahore.
Williams, Rev. James Ernest Harris .. .. .. (On leave.)
Proby, Rev. Randolph Simon Bennertz .. .. (On leave.)
Henry, Rev. W. E. Charles .. .. .. Kohat.
Dixon, Rev. Thos. Harold, M.A. .. .. .. (On leave.)

And 20 Junior Chaplains.

United Provinces Ecclesiastical Department.

Westcott, The Right Reverend George Herbert .. Lord Bishop of Lucknow.
Chapman, The Ven'ble Percy Hugh, M.A., LL.D. .. Archdeacon of Lucknow.
James, J. W. Langford .. .. Registrar of the Diocese of Lucknow.

SENIOR CHAPLAINS.

Ninis, Rev. Richard Duncan .. .. (On leave.)
Smith, Rev. H. T. P. .. .. Benares.
Bell, Rev. William Lachlan, M.A. .. .. .. (On leave.)
Kitching, Rev. W. L. W. .. .. On combined leave.
Irwin, Rev. Benjamin Christopher Bulteel, M.A. .. Meerut.
Irwin, Rev. Ronald J. Beresford, M.A. .. .. Naini Tal, Offg. Archdeacon of Lucknow.

And 15 Junior Chaplains with 7 Additional Clergy.

CHURCH OF SCOTLAND;

Four Senior Chaplains.

THE ROMAN CATHOLIC CHURCH.

With regard to numbers, the *Catholic Directory of India*, 1913, gives the following discrepant tables:—

	Civil Census, 1911.	Ecclesiastical Estimate.
British India { Latin rite	1,430,582	1,535,820
British India { Syriac rite	413,142	364,660
Total, British India and Prot. States	1,843,724	1,900,480
Burma	60,282	88,447
Ceylon	339,300	322,163
Total, India, Burma and Ceylon	2,243,306	2,311,090
French India	....	25,918
Portuguese India	....	296,148
Ecclesiastical Grand Total ..	....	2,663,156*

* After trying to rectify discrepancies the *Directory* fixes as probable the following numbers:—

European and Anglo-Indian Catholics	114,512
Baptised Indian Catholics	2,423,286
Total ..	2,537 798

The Catholic community as thus existing is composed of the following elements:—

(1) The "Syrian" Christians of the Malabar Coast, traditionally said to have been converted by the Apostle St. Thomas. They were brought under allegiance to the Pope by the Portuguese in 1599, and placed first under Jesuit bishops and then under Carmelite Vicars Apostolic. They are at present ruled by four Vicars Apostolic of their own Syriac rite.

(2) Converts of the Portuguese missionaries from 1500 and onwards, starting from Goa and working in the south of the peninsula and up the west coast, Ceylon, Bengal, etc.

(3) European immigrants at all times, including British troops.

(4) Modern converts from Hinduism and Animism in recent mission centres

The Portuguese mission enterprise starting after 1500, continued for about 200 years, after which it began to decline. To meet this decline fresh missionaries were sent out by the Congregation *de propaganda fide*, till by the middle of the 19th century the whole country was divided out among them except such portions as were occupied by the Goa clergy. Hence arose a conflict of jurisdiction in many parts between the Portuguese clergy of the "padroado" or royal patronage, and the propaganda clergy. This conflict was set at rest by the Concordat of 1886. At the same time the whole country was placed under a regular hierarchy, which after subsequent adjustments now stands as follows:—

Of the **Portuguese Jurisdiction**:—

The archbishopric of Goa (having some extension into British territory) with suffragan bishoprics at Cochin, Mylapore and Damaun (all three covering British territory).

Of the **Propaganda Jurisdiction**:—

The archbishopric of Agra with suffragan bishoprics of Allahabad and Rajputana and the Prefecture Apostolic of Bettiah.

The archbishopric of Bombay, with suffragan bishoprics of Poona, Mangalore and Trichinopoly.

The archbishopric of Calcutta, with suffragan bishoprics of Dacca and Krishnagar, and the Prefecture Apostolic of Assam.

The archbishopric of Madras, with suffragan bishoprics of Hyderabad, Vizagapatam and Fagpur.

The archbishopric of Pondicherry (French) with suffragan bishoprics of Mysore, Coimbatore and Kumbakonam.

The archbishopric of Simla with suffragan bishopric of Lahore and the Prefecture Apostolic of Kashmere.

The archbishopric of Colombo (Ceylon) with suffragan bishoprics at Kandy, Galle, Jaffna and Trincomalee.

The archbishopric of Verapoly, with suffragan bishopric of Quilon.

Four Vicariates Apostolic of the Syriac rite for the Syrian Christians of Malabar.

Three Vicariates Apostolic of Burma.

The European clergy engaged in India almost all belong to religious orders, congregations or mission seminaries, and with a few exceptions are either French, Belgian, Dutch; Swiss, Spanish or Italian by nationality. They number about 1,000 besides which there is a body of secular clergy mostly native to the country, numbering about 2,000 and probably about 2,000 nuns. The first work of the clergy is parochial ministration to existing Christians, including railway people and British troops. Second comes education, which is not confined to their own people; their schools being frequented by large numbers of Hindus, Mahomedans, Parsis, etc. Among the most important institutions are St. Xavier's College, Calcutta, St. Peter's College, Agra, St. Xavier's College, Bombay, St. Joseph's College, Trichinopoly, St. Aloysius College, Mangalore, teaching university courses; besides a large number of high schools and elementary schools. The education of girls is supplied for by numerous convent schools worked by religious congregations of nuns to say nothing of orphanages and other charitable institutions. The total number under education amounted in 1904 to 143,051 boys and 73,164 girls, later figures being unavailable. As to missionary work proper, the country is covered with numerous mission centres, among which those in Chota Nagpur, Gujerat, Orissa, the Nizam's Dominions, the Ahmednagar district and the Telugu coasts may be mentioned. (Full particulars on all points will be found in the Catholic Directory already quoted.) The mission work is limited solely by shortage of men and money, which if forthcoming would give the means to an indefinite extension. The resources of the clergy after the ordinary church collections and pay of a few military and railway chaplaincies are derived mainly from Europe, that is, from the collections of *the Society for the Propagation of the Faith* and of *the Holy Childhood*, helped out by private or other donations secured from home by the different local missionaries. In mission work the fathers count as enrolled only those who are baptised and persevering as Christians, and no baptism, except for infants or at point of death, is administered except after careful instruction and probation. This, while keeping down the record, has the advantage of guaranteeing solid results.

The Holy See is represented by a Delegate Apostolic of the East Indies who resides at Bangalore.

THE SCOTTISH CHURCHES.

The Church of Scotland.—The Chaplaincy work of the Church of Scotland dates from 1814, when the Rev. Dr. Bryce landed in Calcutta, and organised a congregation of his Scottish fellow countrymen. The centenary of the churches in the three Presidency towns was celebrated: Calcutta, 1914; Bombay, 1919; Madras, 1921. Since 1903 there have been eighteen chaplains on the staff, of whom nine belong to the Bengal

Presidency, five to Bombay, and four to Madras. These minister both to the Scottish troops and to the civil population of the towns where they are stationed, but when there is a Scottish regiment the chaplain is attached to the regiment, instead of being posted to the station where the regiment happens to be placed and as a rule moves with the regiment. There are three Presidency senior Chaplains in charge of Bengal, Bombay, and Madras respectively. There are churches in the chief towns of the Presidencies, and churches have also been built, in all considerable military stations, *e.g.*, Chakrata, Lucknow, Peshawar, Ranikhet, Rawalpindi, Sialkot, Umballa and Jubbulpore. In addition to the regular establishment there are a number of acting Chaplains sent out by the Colonial Committee of the Church of Scotland, and these are serving in such stations as Rawalpindi, Lahore, Cawnpore, Meerut, Mhow and Quetta. The Additional Clergy Societies in India contribute towards the cost of this additional establishment. In other places such as Sialkot, Murree, Dalhousie, and Darjeeling, regular services are provided by Scottish Missionaries. Simla has a minister of its own sent out from Scotland.

The Mission work of the Church of Scotland dates from 1829, when Alexander Duff, one of the greatest of modern missionaries, was sent to Calcutta. He was the first to open schools where English was made the medium for instruction, and where religious teaching was given daily. Similar educational missions were soon afterwards started in Bombay and Madras. Educational work is still an important branch of the mission work of the Church, but the Bombay College was closed in 1891, and in 1907 the College in Calcutta was united with the College of the United Free Church of Scotland, to form the "Calcutta Christian College." In the Punjab Evangelistic work is being carried on from eight centres under seventeen missionaries. The baptised Christian community now numbers over 14,000. Work commenced in Darjeeling in 1870 is now carried on throughout the whole Eastern Himalayan district, and there is a Christian community there of over 8,000. In the five mission districts of Calcutta, the Eastern Himalayas, Madras, Poona, and the Punjab there were at the end of 1919 over 24,787 baptised Indian Christians. In connection with these missions the Women's Association of Foreign Missions does invaluable service in school, medical and zenana work, having in India 41 European missionaries, 103 teachers, over 50 schools, three hospitals and six dispensaries.

The Church of Scotland has also done much to provide education for European children in India. Together with the United Free Church St. Andrew's Church provides the governing body of the Bombay Scottish High Schools, which have always held a high place among such institutions, and exercises pastoral supervision over the Bombay Scottish Orphanage. In Bangalore there is the St. Andrew's High School, and both in Bangalore and in Madras the local congregation supports a school for poor children. The Ayrcliffe Girls' Boarding and High school is under the care of the Kirk-Session of St. Andrew's Church, Simla The now well known St. Andrew's Colonial Homes at Kalimpong, Bengal, though not directly part of the work of the Church of Scotland, were initiated by and are being locally managed by missionaries of that Church. The homes exist for the benefit of the domiciled European Community, and are doing magnificent work. There are now twenty cottages, and about 600 children in residence. Further information may be found in "Reports of the Schemes of the Church of Scotland," Blackwood & Sons; "The Church of Scotland Year Book" and "The Handbook of the Church of Scotland in India and Ceylon" a new edition of which is being prepared.

The United Free Church of Scotland.—This branch of the Scottish Church has only three purely European congregations in India, two in Calcutta, Wellesley Square, and Howrah and one in Bombay, Wandby Road. In Calcutta the Howrah Church is in the district of the mills, and every effort is made to minister to the Scottish Engineers and other workers in the mills. As noted above members of these congregations co-operate with the Established Church of Scotland in providing education for European children.

The Church carries on Mission work in seven different areas. They are Bengal (Calcutta, Kalna and Chinsura); the Santal Parganas, with five stations; Western India (Bombay, Poona and Alibag); Hyderabad State (Jalna, Bethel and Parbhani); Madras (Madras City, Chingleput, Sriperumbudur and Conjeeveram); the Central Provinces (Nagpur, Bhandara, Wardha, and Amraoti); Rajputana, where the extensive work instituted by the United Presbyterian Church in 1860 is now carried on from eleven centres.

The work falls into three main divisions, evangelistic, medical, and educational. The Christian community has been organised in all the chief centres into congregations which form part of the Indian Presbyterian Church, and this Church is seeking to take an increasing share in the work of evangelism. There are nineteen Mission Hospitals, among which are four excellently equipped and staffed Women's Hospitals, in Madras, Nagpur, Ajmer, and Jaipur. From the days of Duff in Calcutta and Wilson in Bombay the Mission has given a prominent place to education. It has many schools in all parts of its field and it has also made a large contribution to the work of higher education through four Christian Colleges. The Scottish Churches College, Calcutta, is under the joint management of the Church of Scotland and the United Free Church. The Madras Christian College, which owes so much to the work of Dr. William Miller, is now under the direction of a Board representing several Missionary Societies. Wilson College, Bombay, with which the names of Wilson and Dr. Mackichan are specially associated and Hislop College, Nagpur, are under the direct management of the United Free Church.

BAPTIST SOCIETIES.

THE BAPTIST MISSIONARY SOCIETY OF GREAT BRITAIN.—Formed in 1792, largely through the efforts of Dr. Wm. Carey, operates mainly in Bengal, Bihar, the United Provinces, the Punjab, and Ceylon. The Baptist Zenana Mission has recently been united with this Society. The staff of the united Mission numbers 234 missionaries and about 1,000 Indian workers. Connected with the Society are 228 Indian Churches, 300 Day Schools, 22 Middle and High Schools, and 4 Theological Training Colleges. The Church membership at the close of 1920 stood at 15,278 and the Christian Community at 40,664. In the methods of the Society, the chief place is given to Bazaar and Village preaching. Increase in membership during the past ten years, about 60 per cent. and in the community 50 per cent. for the same period. Amongst the non-caste people great progress has been made in recent years, and Churches formed from amongst these peoples are self-supporting.

Special work amongst students is carried on in Calcutta, Dacca, Baukipore, Cuttack and Delhi, where hostels have been erected for the prosecution of this form of work.

EDUCATIONAL WORK.—Ranges from Primary School to Colleges. Serampore College, the only College in India able to bestow a theological degree granted under Royal Charter by His Danish Majesty in 1827, and confirmed by the British Government in the Treaty of purchase of the Settlement of Serampore in 1845, and placed in 1856 by the College Council at the disposal of the Baptist Missionary Society to become a part of its Missionary Educational operations, Arts and Theological. It was affiliated in 1857 to the newly-formed Calcutta University; reorganised in 1910 on the lines of its original foundation with the appointment of a qualified Theological Staff on an Inter-denominational basis for the granting of Theological Degrees to qualified students of all Churches.

As the only College in India granting a Theological Degree a large number of students are now resident in the splendid College Buildings. In Arts, the College prepares for the Calcutta Arts Examinations. *Principal* : Rev. G. Howells, M.A., B.D., B.LITT., PH. D.

A Vernacular Theological Institute, and High School likewise attaches to Serampore. There are institutes also at Delhi and Cuttack, for the training of Indian preachers.

There are 9 or 10 purely English Baptist Churches connected with the Society, but English services are carried on in many of the stations where an European population obtains. Medical work connected with the Society reported 5 Hospitals, 8 Dispensaries, and about 45,000 out-patients for the year 1920. Two large Printing Presses for both English and Vernacular work are conducted at Calcutta and Cuttack. The Secretaries of the Mission are the Rev. Herbert Anderson and the Rev. William Carey, 48, Ripon Street, Calcutta.

The Headquarters of the Mission are at 19, Furnival Street, Holborn, London. The total income for 1920 of the Society amounted to £291,183.

THE CANADIAN BAPTIST MISSION.—Was commenced in 1873, and is located in the Eastern Telugu District to the north of Madras, in the Kistna, Godavari, Vizagapatam, and Ganjam Districts. There are 22 stations and 313 outstations with a staff of 96 missionaries, including 9 qualified physicians, and 725 Indian workers, with Gospel preaching in 1,400 villages. Organised Churches number 76, communicants 12,742 and adherents 20,409 for the past year. Thirteen Churches are entirely self-supporting. In the Educational department are 355 village day schools, with12,326 children, 11 boarding schools, 2 High schools, a Normal Training school, a Theological Seminary providing in all for 900 pupils, and an Industrial school. There are 6 Hospitals and two leper asylums. The Mission publishes a Telugu newspaper. Village Evangelisation is the central feature of the Mission, and stress is laid upon the work amongst women and children. During the last decade membership has increased by 52 per cent., the Christian community by 50 per cent., and scholars by 500 per cent. The Indian Secretary is the Rev. Gordon P. Barss, Tekkali, Ganjam District.

THE AMERICAN BAPTIST TELUGU MISSION.—Was commenced in the year 1836, and covers large parts of Nellore, Guntur, Kistna, and Kurnool Districts, and parts of the Deccan. Its main work is evangelism, but there is large Educational and Medical work in addition. There is an English Church in Madras. A large industrial Yerukala settlement is carried on at Kavali under the charge of one of the missionaries. Organized Telugu Churches, number 176, with 72,178 baptised communicants. There has been a net increase of 1,000 per annum for the past twenty years. There are 108 Missionaries and 2,051 Indian Workers. There is a large Theological Seminary at Ramapatnam for the training of Indian preachers and a Bible School at Vinukonda for training Bible Women. In ordinary educational work 848 primary schools, 26 Boarding Schools, 4 High Schools, 3 Training Schools and 1 Theological Seminary give training to 24,362. In Medical work 6 hospitals report 2,187 in-patients and 19,583 out-patients for the year.

Secretary: A. M. Boggs, Narasaravupet, Guntur District.

AMERICAN BAPTIST FOREIGN MISSION SOCIETY, organized in 1814, has Missions in Burma begun 1814; Assam 1836; Bengal and Orissa 1836; South India 1840. It owes its rise to the celebrated Adoniram Judson. Until 1910 the Society was known as the American Baptist Missionary Union. There are 33 main stations in Burma, 12 in Assam, 10 in Bengal and Orissa, 25 in South India, besides hundreds of outstations. All forms of missionary enterprise come within the scope of the Society.

The missionary staff numbers 418 in all, with an Indian workers' staff of 5,382. Communicants number 171,093. Organized churches number 1,481 of which 981 are self-supporting. Educational work is conducted on a large scale, the total number of schools of all grades being 2,105 with over 65,000 pupils. The Christian College has 74 students in coll-

ege classes. There are nineteen High Schools with 2,813 pupils.

Medical work embraces 13 Hospitals and 35 Dispensaries, in which 78,020 out-patients and 1,832 in-patients were treated last year.

Indian Christians contribute annually more than Rs. 3,03,463 for religious and benevolent work within the Mission.

The great work of the Mission continues to be evangelistic and the training of the native preachers and Bible-women, and extends to many races and languages, the most important of which, in Burma, has been the practical transformation of the Karens, whose language has been reduced to writing by the Mission The work in Assam embraces 9 different languages, and large efforts are made amongst the employers on the tea plantations. The Mission Press at Rangoon is the largest and finest in Burma.

Assam Secretary, Rev. A. J. Tuttle, Gauhati, Assam.

Burma Secretary, Rev. Walter E. Wiatt, 15, Mission Road, Rangoon, Burma.

Bengal and Orissa Secretary, Rev. Harold I. Frost, Balasore, Orissa.

South India (or Telugu) Secretary, Rev. W. J. Longley, Ramapatnam, S. India.

THE TASMANIAN BAPTIST MISSION.—With 3 missionaries, established at Serajgunge, E. Bengal.

Secretary: Rev. T. C. Kelly, Mission House, Serajgunge.

THE AUSTRALIAN BOARD OF BAPTIST FOREIGN MISSIONS.—Embracing the societies representing the Baptist Churches of the States of the Australian Commonwealth. The field of operations is in East Bengal. The staff numbers 38 Australian workers. There are 1,878 communicants and a Christian community of 3,937.

Secretary Field Council: Rev. H. J. Sutton, M. A., Mymensingh.

THE STRICT BAPTIST MISSION.—Has 11 Missionaries, and 95 Indian Workers in Madras, W. and the Salem District. Communicants number 225; organised Churches 4; elementary schools 32, with 1,500 pupils.

Secretary: Rev. E. A. Booth, Kilpauk, Madras, W.

AMERICAN BAPTIST, BENGAL-ORISSA MISSION commenced in 1836. Area of operation: Midnapore district of Lower Bengal and Balasore district of Orissa. Mission staff 38, Indian workers 364. One English Church and 22 Vernacular Churches, Christian Community 5,000: One hospital and two dispensaries. Educational: One Theological and one High School, and 150 Elementary schools, pupils 4,405. One Industrial school for weaving and carpentering, &c The Vernacular Press of this mission printed the first literature in the Santali language.

Secretary: Rev. Harold I. Frost, Balasore, Orissa.

PRESBYTERIAN SOCIETIES.

THE IRISH PRESBYTERIAN CHURCH MISSION.—Operates in Gujerat and Kathiawar with a staff of 33 Missionaries of whom 4 are qualified doctors and an Indian staff of 460 including school teachers. There are 11 Organised Churches, a communicant roll of 1,618, and a Christian community of 6,309. In Medical work there are 3 Hospitals, 5 Dispensaries, with 460 in-patients and 13,543 out-patients. The Mission conducts 2 High schools, 1 Anglo-Vernacular school, and 124 vernacular schools affording tuition for 6,273 pupils, 4 Orphanages, a Divinity College at Ahmedabad, a Teachers' Training College for men, a Teachers' Training College for women, both at Ahmedabad, and a Mission Press at Surat. The Mission has made a speciality of farm colonies, of which there are about a score in connection with it, most of them thriving.

The Jungle Tribes Mission with 5 missionaries is a branch of the activities of the above, working in the Panch Mahals and Rewa Kantha districts, with farm colonies attached.

Secretary: Rev. H. Martin, B.A., Mission House, Anand.

THE UNITED PRESBYTERIAN CHURCH OF NORTH AMERICA. The Sialkot Mission of the above Church was opened at Sialkot, Punjab, in 1855. It is now carrying on work in ten districts of the province. Its missionaries number 91, and its Indian workers 779. Its educational work comprises one Theological Seminary, one College, five High Schools, one Industrial School, eight Middle Schools, and 197 Primary Schools. The total enrolment in all schools was 14,304 in 1920. The Mission is also carrying on Medical work through four hospitals and eight dispensaries. The total Christian Community in connection with the Mission is 58,599.

Secretary: W. H. Merriam, M.A., Gujranwala, Punjab.

THE AMERICAN PRESBYTERIAN MISSION operates in 3 main sections known as the Punjab, North India and Western India Missions. The American Staff numbers 241 and Indian Staff 1,191. There are 31 main stations and 162 out-stations. Organized churches number 75, 19 of which are self-supporting. There are 10,951 communicants and a total baptized community of 35,572. Educational work as follows: 3 Christian Colleges, and an interest in two other Colleges for women; students 1,322; Theological Schools 2, students 43; Training Schools for village workers 2, High Schools 14, pupils 1,113, Industrial Schools 6, Agricultural Demonstration Farms 4, Teachers' Training Departments 7, Medical students at Miraj 38, Elementary Schools 268; Schools of all grades 325; pupils 12,697. Medical Work: Hospitals 6; Dispensaries 19. Sunday Schools 400 with 12,228 pupils. Contributions for Church and Evangelistic work on the part of the Indian Church Rs. 49,907.

The Hospital at Miraj, under the care of Dr. W. J. Wanless and Dr. C E. Vail is well known throughout the whole of S. W. India, and the Forman Christian College at Lahore under the principalship of Rev. E. D. Lucas, D.D.,

is equally well-known and valued in the Punjab. The Ewing Christian College (Dr. C. A. R. Janvier, Principal) has grown rapidly in numbers and influence. Woodstock College for Women at Mussoorie, Principal Rev. E. E. Fife, D.D., is one of the largest and most valuable institutions of this description in Northern India.

Secretary of Council of A.P. Missions in India: Rev. Dr. J. C. R. Ewing, D.D., LL. D., Litt. D., C.I.E, Lahore.

Secretary, Punjab Mission: Rev. Walter J. Clark, M. A., Lahore.

Secretary, North India Mission: Rev. R. C. Smith, M. A., Fatehpur, U. P.

Secretary, Western India Mission. Rev. H K. Wright, B.A., Vengurla.

THE NEW ZEALAND PRESBYTERIAN MISSION.—Commenced as recently as 1910 at Jagadhri, Punjab.

Secretary: Miss M. Salmond, M. A., Jagadhri.

THE CANADIAN PRESBYTERIAN MISSION.—Commenced in 1877, has 14 main Stations in the Indore, Gwalior, Rutlam, Dhar, Ahrajpur, Jaora, Sitamau, Banswara, &c. Native States—The Mission staff numbers 75, Indian workers 288, Organized Churches 13, Communicants (September 30, 1918) 1,160, Baptised non-communicants 2,404, Unbaptised infants and catechumens 193. Total Christian Community 3,859; Educational work comprises Elementary and Middle Schools, High Schools for boys and girls, College, Theological Seminary and Classes. Industrial teaching and work are done in three Girls' Orphanages, in the Women's Industrial Home, and at Rasalpura which last includes the Mission Press and the School for the Blind. The Medical work is large, chiefly among women.

Secretary: Rev. J. Fraser Campbell, D.D., Rutlam C. I.

THE WELSH CALVINISTIC METHODIST MISSION (OR WELSH PRESBYTERIAN MISSION) established in 1840 with a staff of 32 Missionaries, 600 Native workers occupies stations in Assam in the Khassia and Jaintia Hills, the Lushai Hills and at Sylhet and Cachar. The Khassia language has been reduced to writing, the Bible translated, and many books published in that language by the Mission. A large amount of literature has been produced in the Lushai language also. Communicants number 18,114; the total Christian community 58,500; organised Churches 554; self-supporting Churches 35. Elementary schools number 512, scholars 15,000; Boarding schools 3, scholars 820, in addition to 1 Industrial school, 4 Training institutions and 1 Theological Seminary. Two Hospitals and 3 Dispensaries provided for 10,000 patients in 1920.

Secretary: Rev. E. H. Williams, Shillong.

THE ARCOT MISSION of the Reformed Church in America (Dutch), organised in 1853 occupies the Arcot and Chittoor districts in S. India with a staff of 29 Missionaries, and 504 Indian ministers and workers. Churches number 19, Communicants 3,936, total Christian community 11,298; Boarding schools 11, scholars 528; Theological school 1, students 37; High schools 4, scholars 1,219; Training schools 2, students 44; Industrial schools 2, pupils 95; Elementary schools 181, scholars 6,945. Three Hospitals, 7 Dispensaries with staff of 38, provided for 2,217 in-patients and 82,052 out-patients for the past year.

Secretary: Rev. H. J. Scudder, M.A., & B. D., Punganur, S. India.

CONGREGATIONAL SOCIETIES.

THE AMERICAN BOARD OF COMMISSIONERS FOR FOREIGN MISSIONS.—Has two large Missions, the American Marathi Mission, and the Madura Mission. The Marathi Mission includes a large part of the Bombay Presidency, with centres at Bombay, Ahmednagar, Satara and Sholapur, and was commenced in 1813, the first American Mission in India. Its activities are large and varied. The staff at the beginning of 1921 consisted of 45 missionaries and 608 Indian workers operating in 152 outstations exclusive of Bombay City. Organised Churches number 66 with 8,720 communicants, and 6,950 adherents. There is a Leper work at Sholapur. The Educational work embraces 14 training and secondary schools, with 863 pupils and 179 primary schools, with 7,197 pupils, three-fifths of whom are non-Christians. A Theological College at Ahmednagar trains for the Indian Ministry. Zenana work and Industrial work are vigorously carried on, the latter embracing carpentry, lace work and carpet weaving. A school for the blind is conducted on both Educational and Industrial lines 33,000 patients were treated in the Hospitals and Dispensaries of the Mission last year. Special evangelistic work is carried on amongst the tribes known as the Bhils and Mangs. This Mission was the first to translate the Christian scriptures into the Marathi tongue. At Sholapur, a settlement for Criminal Tribes is carried on under the supervision of Government. *Secretary*: Rev. William Hazen, Byculla, Bombay.

THE MADURA MISSION.—In the S. Madras District, commenced in 1834, has a staff of 61 missionaries and 930 Indian workers, operates in the Madura and Ramnad districts and has a communicant roll of 8,712 with 16,386 adherents and 34 organised churches, many of which are entirely self-supporting and self-governing. Schools number 270 with 10,529 pupils. There is a Christian College at Madura, as also Hospitals for men and women; at Pasumalai are a High School, Theological Institution, Industrial School, Teachers' Training School and Printing Press. The Secretary is the Rev. W. W. Wallace, Madura.

The ARCOT MISSION commenced under the American Board was transferred to the Reformed Church of America in 1851.

THE SCANDINAVIAN ALLIANCE MISSION OF NORTH AMERICA—Embraces two Branches, one in Bengal and the other in Khandesh. The total mission staff is represented by 12 missionaries and 20 Indian workers. There are 62 communicants and a Christian community of 158. Ten Elementary Schools provide for 160 pupils.

Secretaries: Rev. J. S. Otteson, Navapur, Khandesh, and Miss H. Abrahamson, Domar, Bengal.

THE SWEDISH ALLIANCE MISSION.—Working among the Bhils in West Khandesh has 25 missionaries and 37 Indian workers. There are 5 congregations with a total membership of 550, of whom 189 are communicants. There are 10 Elementary Schools, and 2 Boarding Schools. The pupils in Aid Schools are 355.

Secretary: Rev. Enok Hedberg, D. Litt. Dhanora. Nandurbar, Khandesh.

THE FREE CHURCH MISSION OF FINLAND – The total Mission Staff is represented by six Missionaries and 14 Native workers. There are about 120 communicants, five Churches and a Christian Community of about 200. There is one middle school and three day schools. Medical work is carried on, also industrial work (weaving).

Acting Secretary: Miss Kronguist, Lachung *via* Gangtok, Sikkim.

THE LONDON MISSIONARY SOCIETY.—Commenced work in India in 1798 and occupies 10 centres in N. India, 12 in S. India and 7 in Travancore. The Mission engages in every form of Missionary activity. The European staff numbers 160, Indian workers 2,123; Organised Churches 520; Communicants 17,456 and Christian Community 115,068. There are 4 Christian Colleges, students 159; 5 Theological Institutions, students 70; 4 Training Institutions, pupils 114; 22 High schools, pupils 4,849; 25 Boarding schools, scholars 1,167; 9 Industrial schools, pupils 116 and 862 Elementary schools with 36,775 scholars. In Medical work Hospitals number 23, Dispensaries 14, qualified doctors 9 (European), 41 Assistants and 3,971 in-patients and 174,898 out-patients for the year.

The main centres of the Mission in N. India are at Calcutta, Benares and Almora. The Bhowanipur Institution at Calcutta is now a Teacher Training College. Evangelistic work is carried on amongst the thousands of pilgrims visiting Benares, and Almora is noted for its Hospital and Leper Asylum. Special efforts are made amongst the Nama Sudras and the aboriginal tribes known as the Majhwars, Cheros and Pankas. The S. India district is divided into the Kanarese, Telugu, Tamil and Malayalam with 12 stations and 472 outstations. At Nagercoil (Travancore) is the Scott Memorial College with 985 students, a Church and congregation said to be the largest in India, and a large Printing Press, the centre of the S. Travancore Tract Society.

N India Secretary: Rev. J. H. Brown, B.A. B.D., Calcutta.

S. India Secretary: Rev. Geo Wilkins, Bangalore City.

ALL-INDIA MISSIONS.

THE CHRISTIAN AND MISSIONARY ALLIANCE—Dates from the year 1893 under the name of the International Missionary Alliance, but a number of its missionaries were at work in Berar Province much earlier. The work is confined to the provinces of Berar, Khandesh and Gujarat. There is a staff of 72 missionaries and 132 Indian workers. The number of Mission stations is 19, with additional outstations. There is a Christian Community of 2,870 people. There are 4 orphanages, 2 for boys and 2 for girls: 3 training schools for Indian workers, and 1 English congregation at Bhusawal. *Chairman, Treasurer* and *Secretary*:—Rev. W. Moyser, Akola, Berar, C. P.

THE CHURCH OF THE BRETHREN (AMERICAN)—Opened work in 1895, and operates in Broach, Surat, and Thana Districts. Its staff numbers 45 including missionaries' wives, and 146 Indian workers. The baptised (immersed) membership stands at 2,382 and adherents number 1,336; education is carried on in 6 Girls' Boarding schools, 8 Boarding schools for boys, and 70 Village Day schools and 22 Village Night schools. Females under instruction number 594, males 2,124, total under instruction 2,718. Of this number 79 are supported in Training Schools or higher institutions of learning. Industrial work is connected with six of the schools, and a Farm Colony is established at Umballa, Rajpipla State.

THE POONA AND INDIAN VILLAGE MISSION—Founded in 1893 and for 28 years directed by Mr. Charles F. Reeve. On his retirement in January 1921, a Board of Control took charge of operations and continue work in the Poona, Satara and Sholapur districts with an European and 38 Indian workers. Indian Christians associated with the work number 64. The main work is evangelistic in the villages, with women's zenana work and schools. Medical work is conducted at Pandharpur and Lonand and a hospital is now in use in Pandharpur. The Headquarters are at Nasrapur, Poona District. *Chairman of the Board*: N. L. Gooden. *Secretary*: J. W. Stothard, Nasrapur.

THE AMERICAN CHURCHES OF GOD MISSION—Has two missionaries at Bogra, Bengal.

THE INDIAN CHRISTIAN MISSION—Founded in 1897, has 31 Organised Churches, 10 Missionaries, 24 stations, 41 out-stations, 1,392 Communicants, 30 Primary schools and two Industrial Schools in the Ellore district, S. India, stations also in Berenag, Kumaon, N. India, and Nuwara Eliya, and Polgabawella, Ceylon. Total Christian Community 5,848. *Director*: A. S. Paynter, Nuwara Eliya, Ceylon.

THE CHURCH OF THE NAZARENE MISSION—Has its headquarters at Buldana, Berar, where it has a boys' boarding school for training Native preachers and a girls' school for training Bible women. This mission has 3 stations in Thana District, namely, Khardi, Vasind and Murbad. There is a total force of 12 missionaries at present in this part of India, also 28 native preachers and Bible Women.

This mission also works at Kishorganj, Mymensingh District with an orphanage and a force of 12 missionaries; also about 15 preachers and Bible women. This totals 24 missionaries and 43 native preachers and Bible women for the Church of the Nazarene in India.

District Superintendent. K. Hawley Jackson, Buldana, Berar.

THE SANARPUR AND LOHAGHAT DISTRICT BIBLE AND MEDICAL MISSION—Was established at Lohaghat, 48 miles from Almora, in 1910. Amongst the faith missions are the Vanguard Mission at Sanjan, Thana District, with 6 Missionaries; and the Church of God Mission with 7 Missionaries at Lahore. The Burning Bush Mission has a staff of 8 Missionaries at Allahabad. The Tehri Border Village Mission is the only Christian enterprise in the Himalayan Native State of that name, its agents are stationed at Landour, and have translated portions of the New Testament into the Tehri-Garhwali language. *Secretary*: Miss A. N. Budden.

THE HEPHZIBAH FAITH MISSIONARY ASSOCIATION-Has six missionaries. *Agent*: D. W. Zook, Adra, B. N. Ry.

THE TIBETAN MISSION—Has 4 Missionaries with headquarters at Darjeeling, and Tibet as its objective. *Secretary*: Miss J. Ferguson, Darjeeling.

THE INDIAN MISSIONARY SOCIETY OF TINNEVELLY (DORNAKAL MISSION)—Opened in 1904 operates in the Warangal District of the Nizam's Dominions. It is the missionary effort of the Tamil Christians of Tinnevelly. There are now 2,884 Christians in 69 villages *Secretary*: Mr. J. Anbudaiyan, B.A., L T., Palamcottah.

THE MISSION TO LEPERS—Founded in 1874, is an inter-denominational and international Society for the establishment and maintenance of Asylums for Lepers and Homes for their untainted children, working in 12 countries but largely in India, China and Japan. Its work in India is carried on through co-operation with 33 Missionary Societies. In India alone the Mission now has 42 Asylums of its own with over 5,000 inmates and is aiding or has some connection with work for lepers at 21 other places in India. Altogether in India 7,165 lepers are being helped. In the Mission's own and aided asylums in India there are nearly 4,000 Christians.

An important feature of the work of the Mission is the segregation of the untainted or healthy children of lepers from their diseased parents. Nearly 600 children are thus segregated and saved from becoming lepers.

Most of the Mission's income is received from voluntary contributions. In 1920 about Rs. 1,06,000 was raised in India, but the bulk of the money expended by the Mission in India, was received from Britain, although the Provincial Governments give regular maintenance grants.

There is an Indian Auxiliary of the Mission to Lepers, of which H. E. Lady Lloyd who represents the Bombay Presidency is a Vice-President.

The General Secretary of the Mission is Mr. W.H.P. Anderson, 33, Henrietta St., Covent Garden, London W. C. The Acting Secretary for India is the Rev. E. Cannon, Purulia, Behar, to whom all contributions and communications may be sent.

THE REGIONS BEYOND MISSIONARY UNION.—An interdenominational Society commenced work at Motihari, Behar, in 1900, and now occupies 4 stations and 7 outstations in the Champaran and Saran Districts, with a staff of 13 Europeans, and 34 Indian workers. There are 21 Elementary schools, with 517 pupils, a Girls' and a Boys' Orphanage and Boarding school, communicants number 50.

THE NATIONAL MISSIONARY SOCIETY OF INDIA—Established 1905, it has a staff of 25 Indian Missionaries and 45 helpers operates in Montgomery Distrit (the Punjab), Nukkar Thasil (U. P.), North Kanara (Bombay), Karjat-Karmala Talukas (Bombay), Omalur (Madras), Bhagalkund Agency (C.I) and Tirupattur (N. Arcot). Christian community over 4,000. Fifteen Elementary schools and one High School. Two Dispensaries and one Hospital. Organ: *The National Missionary Intelligencer* (a monthly journal in English sold at 12 as. per year post free).

General Secretary: Mr. P. O. Phillip, B.A., N.M.S. Office, Vepery, Madras.

Hon. Associate General Secretary: Rev. Dina Nath, B.A., St. Stephen's Church, Delhi.

THE SEVENTH DAY ADVENTISTS.—Established in India in 1895. Work carried on in English, Hindi, Urdu, Punjabi, Bengali, Santali, Tamil, Telugu, Malayalam, Marathi, Gujarati, Burmese and Karen, including schools, dispensaries and evangelical stations and a publishing house. *President*: W. W. Fletcher; *Secretary* and *Treasurer*: A. H. Williams, 17, Abbott Road, Lucknow.

THE AMERICAN MENNONITE MISSION.—Established 1899, works in the C. Provinces. Mission staff numbers 24, Indian workers 80, Church members 1050, 1 Industrial Training Institution, 1 High School, 2 Vernacular Middle Schools, 1 Men's Home, 2 Homes for untainted children of lepers, 1 Bible School, 2 Orphanages, 1 Widows' Home, 1 Leper Asylum; Elementary Schools, 8; Dispensaries, 4.

Secretary: Rev. J. N. Kaufman, Dhamtari, C. P.

THE GENERAL CONFERENCE—MENNONITE MISSION—Started in 1901 in the C. Provinces. Workers number 12; Leper, Medical, Orphan, Zenana, Evangelistic and educational work carried on. *Secretary*: Rev. E. B. Sterner Janjgir, C. P.

THE KURKU AND CENTRAL INDIA HILL MISSION—Established 1890 in the C. P. and Berar, has a mission staff of 14, Indian workers 22; Churches 6, Communicants 105; Christian community 209; 2 Boarding schools with 95 boarders and 5 Elementary schools. *Ag. Secretary*: Rev. A. S. Crowe, Ellichpur, Berar.

THE CEYLON AND INDIA GENERAL MISSION—Established 1893, occupies stations in India in the Coimbatore and Anantapur Districts. Mission staff 31; Indian workers 78; Churches 10, with Communicants 271, and Christian community 750; Orphanages 4; Elementary schools 30; pupils 682.

Secretary: Rev. H. Merriweather. Authizur, *via* Bhavani Coimbatore District.

THE BOYS' CHRISTIAN HOME MISSION—Owes its existence to a period of famine, was commenced in 1889. Mission staff 13, Indian workers 60. There are elementary schools with three orphanages, two boys and one girl, and a Widows' Home, where Industrial training is

given. There are four main stations—At Dhond, in the Poona District and at Bahraich, Orai and Benares in United Provinces. There are also 10 out-stations. *Director*: Rev. Albert Norton, Dhond, Poona District.

Ladies' Societies.

ZENANA BIBLE AND MEDICAL MISSION.—This is an interdenominational society, with headquarters, 33, Surrey Street, London, working among women and girls in seven stations in the Bombay Presidency, 10 in United Provinces, and 4 in the Punjab. There are 89 European Missionary ladies on the staff and 16 Assistant Missionaries, 243 Indian workers, teachers and nurses and 60 Bible women. During 1920 there were 2,198 in-patients in the five hospitals supported by the Society (Nasik, Benares, Jaunpur, Lucknow and Patna), but the Victoria Hospital, Benares, was closed in 1920. There were 23,019 out-patients, 80,657 attendances at the Dispensaries. In their 52 schools were 13,516 pupils, and there is a University Department at Lahore. The evangelistic side of the work is largely done by house to house visitations and teaching the women in Zenanas; 1,596 women were regularly taught and 2,215 houses were visited. The 60 Bible women visited 550 villages; the number of houses was 2,975.

THE LUDHIANA ZENANA AND MEDICAL MISSION removed their headquarters to Lahore 26 years ago. The North India School for Women with Dr. Brown at its head took its place, the name since being changed to that of the Women's Christian Medical College. The Memorial Hospital was opened in 1900 and in 1915 the name was again modified to its present title "The Women's Christian Medical College" with which is incorporated the Punjab Medical School for Women. In 25 years 335 women were trained for Medical Service, 61 Medical Students, 41 certificated Compounders, 53 Graduate Nurses while over 180 have become certificated Midwives and Dais. Plans are now on hand to enlarge both hospital and College considerably.

THE MISSIONARY SETTLEMENT FOR UNIVERSITY WOMEN was founded in Bombay in 1895 to reach the higher class of Indian ladies, its activities now include a hostel for women students, in addition to educational, social, and evangelistic work. *Warden*: Miss Gedge, Rebsch Street, Jacob Circle, P. O., Bombay.

THE MUKTI MISSION, the well-known work of Pandita Ramabai, enables upwards of 850 widows, deserted wives and orphans to earn a comfortable living by means of industrial work organised by the Pandita, supported by a good staff of Indian helpers. A staff of 12 European workers do evangelistic work in the surrounding Kedgaon, Poona District.

Disciple Societies.

The India Mission of the Disciples of Christ (Foreign Christian Missionary Society of Cincinnati, Ohio, and Christian Women's Board of Missions of Indianopolis combined) commenced work in 1882; its area Central and United Provinces; number of Indian Churches 14, and immersed communicants 18,450. The Christian Constituency numbers 2,945. Its staff, including Missionaries' wives, 76; Asst. missionaries 2 and Indian Workers' staff 319. There are 8 Hospitals, 13 Dispensaries, with 109,994 in-patients and out-patients for the past year. Two Orphanages and an Industrial Home show 536 inmates, and one Boarding School for girls and two hostels for boys, 664 inmates. Two leper asylums with 95 inmates. Tubercular Sanatarium at Pindra Road: 44 in-patients during year. In connection with the industrial work a farm of 400 acres has been taken at Damoh, an Industrial School at Damoh which teaches carpentry, needle work industry at Kulpahar which did Rs. 6,200 worth of business last year. Printing work at Jubbulpore 3,000,000 pages of Christian Literature last year. There are 8 Middle schools, 34 Primary schools with 2,917 scholars; 2 Boarding schools, with 300 students. An active zenana work is carried on, and there is a home for women and children.

The Australian branch has three Mission stations in Poona District. The Great Britain and Ireland branch has two mission stations, one in Mirzapur District, U. P., and one in Alamau District, Orissa. These have no organic connection with the India Mission of the Disciples of Christ.

Secretary: Rev. W. B. Alexander, Jubbulpore, C. P.

Undenominational Missions.

THE CENTRAL ASIAN MISSION, with a Church, Dispensary and School is found on the N.-W. Frontier, conducted on the lines of the China Inland Mission, and has Kafristan as its objective.

THE FRIENDS' FOREIGN MISSION ASSOCIATION works in five stations of the Hoshangabad Division of the Central Provinces, and in two of the adjacent Bhopal State, and has also some work going on in that of Gwalior. There are 6 Churches, 21 missionaries, 179 members, Boarding Schools for Boys and Girls, 1 Anglo-Vernacular School, 15 Day Schools, 1 High School, 1 Hospital, and 2 general dispensaries connected with the Mission, in addition to a self-supporting weaving community at Itarsi and a Farm Colony at Makoriya, in Hoshangabad District. *Secretary*: Mr. A. Taylor, Sehore Cantonment, C. I.

THE AMERICAN FRIENDS' MISSION with 5 Missionaries is working at Nowgong. *Secretary*: Miss E. E. Baird, Nowgong, C. I.

THE OLD CHURCH HEBREW MISSION was established in 1858, in Calcutta, and is said to be the only Hebrew Christian Agency in India. *Secretary*: J. W. Pringle, Esq., Calcutta.

THE OPEN BRETHREN—Occupy 46 stations in the U. Provinces, Bengal, S. Mahratta, Godaveri Delta, Kanarese, Tinnevelly, Malabar Coast, Coimbatore and Nilgiri Districts. They hold an annual Conference at Bangalore.

Lutheran Societies.

THE AMERICAN EVANGELICAN LUTHERAN MISSION. General Council, founded in 1844 for the Godaveri and Kistna Districts, has its Headquarters at Rajahmundry. Its staff consists of 24, including Missionaries' wives and Lady Doctors, with 1,692 Indian Workers. The membership is 34,901. There are Boys' and Girls

Central Schools, Mission Press, a well-equipped hospital and Book Depot at Rajahmundry, and a High School at Peddapur and another at Bhimavaram, since November 1918 the two American Lutheran Missions at Guntur and Rajahmundry have been amalgamated, existing as two Conferences now *Chairman*: The Rev. E. Neudoerfer, Bhimavaram

The General Synod Section of the above has its headquarters in Guntur, founded in 1842. Its Christian Community numbers 63,301 with 21,969 communicants, 32 missionaries inclusive of wives and 1,132 Indian workers The following institutions are connected with the Mission: a second grade College, High School for Girls, Hospital for women and children, School for the Blind, Normal Training School, and Industrial School. *Secretary*. The Rev. J. R. Strock, Guntur.

THE EVANGELICAL NATIONAL MISSIONARY SOCIETY OF SWEDEN, founded in 1856, occupies the districts of Betul, Chindwara and Saugor in the Central Provinces. There are 1,619 Church members and 11 Indian Congregations. The staff numbers 26, including women, with an Indian staff of 175. Schools number 41 with 1,455 children. Only two of the schools are Secondary, all the rest are Primary Schools There are small dispensaries at most of the stations. There are three Christian Colonies, 2 Workshops, one of them with an aided Carpentry School, 1 Female Industrial School, 1 Widows' Home, 6 Orphanage and Boarding Schools for Christian children. *Secretary* Rev. P. E. Froberg, Chindwara, C. P.

THE KANARESE EVANGELICAL MISSION with Headquarters at Mangalore, South Kanara, was organised on January 1st 1919 to take over the Mission work done formerly by the Basel German Evangelical Mission in two of her fields, namely, the Districts of South Kanara and South Mahratta. The majority of the missionaries and of the Funds come from Switzerland. Part contributions are received from the late Basel Mission Industrial Department, now under British ownership and management as the "Commonwealth Trust Limited." The Mission has 12 chief stations and 56 outstations with a total missionary staff of 23 and 360 Indian workers. There are 66 organised congregations with a total membership of 11,060, which gave last year Rs. 11,900 for church and mission work. Educational work embraces 66 schools, of which there are 4 High Schools. The students number 6,735.

Medical work is done at Betgeri with a full staff and a hospital and two branch hospitals and dispensaries.

The Mission maintains a Home-Industrial department for women's work, and a large Publishing department at Mangalore with a bookshop and a printing press occupying some 150 hands and doing work in many languages.

Secretary: Rev. W. E. Tomlinson, Mangalore.

THE CHURCH OF SWEDEN MISSION—Was founded in 1874. Operated till 1915 in the Madura, Tanjore, Trichinopoly and Ramnad Districts. Since 1915 the Mission having taken full charge of the former Leipzig Evangelical Lutheran Mission field, works also in the Madras, Chingleput, Coimbatore, Salem and S. Arcot Districts with diaspora congregations in Rangoon, Penang and Colombo. European staff numbers 14, Ordained Indian Ministers 31, Indian workers 112, Organised Churches 42, Baptised Membership 20,945, Schools 281, Pupils 13,134 (10,022 boys, 3,112 girls). Teaching staff 664. *Secretary*: Rev. E. Heuman, Ph.D., D.D., Mayavaram.

THE MISSOURI EVANGELICAL LUTHERAN MISSION—is located in North Arcot, Salem, Tinnevelly and Travancore with a staff of 11 Missionaries. Three Training Institutions, 166 pupils, 68 Elementary schools with 3,049 pupils are connected with the Mission. *Secretary*: Rev. Henry Hamann, Ambur, N. Arcot District.

THE DANISH EVANGELICAL LUTHERAN MISSION.—Established 1863 in South Arcot, working there and in North Arcot, on the Shevaroy Hills and in Madras, has a total staff of 214 Indian and 45 European workers, Communicants 1,050, Christian community 3,000, 1 High School, 2 Boarding Schools, 4 Industrial Schools, Elementary Schools 58, total scholars 3,484.

Chairman: Rev. J. Bittmann, 38, Broadway, Madras.

THE SANTAL MISSION OF THE NORTHERN CHURCHES (formerly known as the India Home Mission to the Santals)—Founded in 1867, works in the Santal Parganas, Goalpara (Assam), Malda and Dinajpur. Work is principally among the Santals. The mission staff numbers 27; Indian workers 480; communicants 4,000; Christian community 23,000; organised churches 36; boarding schools 4; pupils 508; elementary schools 69; pupils 1,035; industrial schools 2; Orphanage 1; children 29. *Secretary*: Rev. P. O. Bodding, Dumka, Santal Parganas.

MISSIONS AND ENEMY TRADING ACT.—In May 1918, the following notice regarding Missions was published in the "Gazette of India":—"The following missions or religious associations are declared companies under Act 2 (the Enemy Trading Act) of 1916:—The Leipzig Evangelical Lutheran Mission, Madras, the Hermansberg Evangelical Lutheran Mission, Madras, the Schleswig-Holstein Evangelical Lutheran Mission, Madras, the Gossner Evangelical Lutheran Mission of the United Provinces and Behar and Orissa, the German Evangelical Lutheran Mission of Ranchi, Bihar and Orissa. The Governor-General in Council notifies that the powers conferred under Section 7 of the said Act shall extend to the property, movable and immovable, of these missions or religious associations."

In June, 1919, the Government of India stated:—"Effect is already being given to the suggestion that enemy missions in India should be taken over by British societies. The properties and undertakings of hostile missions have been vested in the Provisional Custodian of Enemy Property with a view to their transfer to boards of trustees composed partly of non-official members nominated by the National Missionary Council of India with the approval of the Government of India and partly of Government officials, and those Boards of Trustees will in due course transfer the undertakings and properties to a missionary society to be selected by them with the approval of the Governor-General in Council.

Methodist Societies.

The Methodist Episcopal Church began its Indian Mission in 1857, and is now established in all the Provinces of India except Assam and the North West Frontier Province. It has 360,258 baptized Christians under the supervision of 349 foreign missionaries, 466 ordained and 2,117 unordained Indian ministers. The number of baptized Christians increased during the quadrennium 1916-1919 inclusive by 60,833.

The educational work of this Church is extensive. Schools of all grades number 1,819 of which 571 are for girls and young women. The students number 44,084, of which 26,254 are Christians and 10,029 are resident in hostels managed by the Church. Its best known educational institutions are the Isabella Thoburn College at Lucknow (for women), the Lucknow Christian College, the Philander Smith College at Naini Tal (for Europeans and Anglo-Indians), Collins Institute at Calcutta, the Bareilly Theological Seminary, and the Florence B. Nicholson School of Theology at Baroda. The Church maintains one College and ten High Schools for Europeans and Anglo-Indians.

In Burma there are 19 schools with an enrolment of 2,189 pupils. The Anglo-Burmese Boys' School is a large institution. There is a Boarding and Day School for European girls at Rangoon and another in the hill station of Thandaung. Work is carried on in Burma in Chinese, Burmese, Tamil, Telegu, Hindustani and English with organized Churches representing each of those communities.

Sunday Schools number 5,816 with 166,879 students. The young people's society is known as the Epworth League. It has 864 local organizations with 26,123 members.

There are large printing presses at Lucknow and Madras and the publishing of books, papers and tracts is one of the features of the Church's work in India. The Indian Witness, the Kaukab-i-Hind, the Woman's Friend, the Children's Friend, and various Sunday School periodicals are well known publications.

The Centenary of the founding of the Missionary Society occurred in 1919 and has been extensively celebrated in India. A commission with Rev. B. T. Badley of Shahjanpur, U. P., as Executive Secretary has conducted a campaign for extending and strengthening the work of the Church. Special attention has been given to the deepening of the spiritual life, to Non-Christian evangelization, to temperance, to sanitation, to schools and to the financial needs of the Church. A five-year effort is now in progress to achieve certain objectives among which are:—To double the number of Christian children in Methodist Schools, to assist poor converts to obtain freedom from economic oppression, and to raise the sum of Rupees fifty lakhs in India for education, support of pastors and numerous benevolences.

The supreme legislative authority of the Church is the quadrennial General Conference which has hitherto always met in the U. S. A. Delegates from all countries meet in this Conference on equal terms. The Church in India is subject to this General Conference in which however it has large representation. There are four Bishops as follows:—Bishop F. W. Warne, Lucknow; Bishop J. W. Robinson, Bombay; Bishop F. B. Fisher, Calcutta; and Bishop H. Lister Smith, Bangalore.

The American Wesleyan Mission, Sanjan, Thana District and Pardi, Surat District, has seven Missionaries on the field and three more under appointment, two main stations, six outstations, nine Schools, one orphanage and an industrial farm. *Superintendent*: C. B. Harvey, Sanjan, Thana District.

The Reformed Episcopal Church of American (Methodist) at Lalitpur and Lucknow, U. P., has 2 Missionaries, 4 Outstations, 2 Orphanages, and a membership of nearly 100.

THE WESLEYAN METHODIST MISSIONARY SOCIETY commenced work in India in 1817 (Ceylon in 1814). The Mission in India, apart from Ceylon, is organised into 8 District Synods with 2 Provincial Synods. There is a large English work connected with the Society, 20 ministers giving their whole time to Military work and English churches.

The districts occupied include 64 main stations in Bengal, Madras, Mysore, Bombay, Punjab, Central Provinces, Hyderabad (Nizam's Dominions), United Provinces and Burma. The European staff numbers 110 with 65 Indian Ministers and 742 Indian workers; Communicants 15,800, and total Christian community 63,304. There are 4 large numbers of organised Churches many of which are self-supporting.

Educational work comprises 3 Christian Colleges, students, 2,143; 5 Theological Institutions, Students, 238; 10 High Schools, pupils, 4,524; 14 Industrial schools, pupils, 500; 857 Elementary schools, with 27,189 scholars. In Medical work there are 3 hospitals, 6 dispensaries, 1,033 in-patients and 43,227 out-patients. The Society expended over £85,000 on its Indian Missions in 1920.

The Women's Auxiliary carry on an extensive work in the places occupied by the men's society. There are 71 women workers from Britain of whom 9 are qualified doctors. The Indian women workers number 274. There are 109 girls' day schools with 7,786pupils and 31 boarding schools with 1,979 boarders. There are several philanthropic institutions for the rescue and training of women. The women manage 12 hospitals and 3 dispensaries, which had 5,788 in-patients and 70,529 out-patients. The cost of the work to the Women's Auxiliary in 1920 was over £20,000.

The above particulars are those published for 1920.

Vice-Chairman of General Synod: Rev. D. A. Rees, Bangalore.

The Women's Foreign Missionary Society of the M. E. Mission is divided into 6 Conferences and is co-extensive with the main work of the Mission. 110 Lady Missionaries are engaged in Educational, Zenana, and Evangelistic and Medical work. The Secretary for the Bombay Conference is Miss C. H. Lawson, Talegaon-Dabhada, Poona District.

THE FREE METHODIST MISSION of North America—Established at Yeotmal, 1893, operates in Berar with a staff of 18 Missionaries and 26 Indian workers. Organised church 1, 1 Theological school and 6 Elementary schools, and 1 Anglo-Vernacular school with 280 pupils. *Secretary*: Miss H. J. Root, B. A., Wun, Berar.

THE SALVATION ARMY.

For many years the operations of the Salvation Army in India were under the immediate direction of eight Territorial Commanders, in part responsible to Commissioner Booth-Tucker, as Special Commissioner for India, and in part to International Headquarters. The General recently decided to divide the country into three distinct Commands, each under its own Territorial Commissioner and directly responsible to International Headquarters.

Northern India.—Included in this Territory are what were previously known as the Punjab Territory, United Provinces of Agra and Oudh Territory, also Bengal, Bihar and Orissa, and Rangoon.

In addition to the evangelistic work, there are Settlements for Criminal Tribes in the United Provinces (where this important work was first introduced), in the Punjab, Bihar and Orissa, and Bengal. The institutions include Naval and Military Homes, Agricultural, Dairy, and Fruit Farms, Silk-worm Rearing School and Weavery; Day and Boarding Schools, Industrial Homes for Women, Home for Stranded Europeans, Home for Youthful Released Prisoners, Hospital, etc. There is also a Training Garrison for Native Cadets.

Corps, 357; Outposts, 1,125; Officers, 318, of whom 228 are Indian, employees and teachers, 67; Social Institutions, 30.

Territorial Headquarters: S. A., Ferozepur Road, Lahore, Punjab.

Territorial Commander: Commissioner Jai Singh (Bullard).

Chief Secretary: Colonel Hira Singh (Hoc).

Western India.—The three Territories of Bombay, Guzerat, and Maratha now form the Territory of Western India.

Besides the distinctly evangelistic operations, there are established a large General Hospital—Thomas Emery Memorial—several Dispensaries, at which during the year about 20,000 patients are treated, over 240 Day and Boarding Schools, also a Boarding School and Hostel for Blnd Children, a Home for Juvenile Criminals, an Industrial Home for Women, a British Soldiers' and Sailors' Furlough Home, Weaving and Silk Schools; a Factory for Weaving, Warping, and Reeling Machines, and a Land Colony having a population of some hundreds of Salvationists. There is a Central Training Garrison at Bombay for English-speaking Cadets in addition to Vernacular Training Garrisons.

Corps, 289; Outposts, 528; Officers, 634, of whom 589 are Indian; employees and teachers, 123; Social Institutions, 15.

Territorial Headquarters: S. A., Sankli Street, Byculla, Bombay.

Territorial Commander: Colonel Horskins.

Chief Secretary: Colonel Jaya Veera (Ewens).

Southern India and Ceylon.—The newly-formed Territory comprises what until the end of 1919 were the three Territories, Madras and Telugu, South India (Travancore), and Ceylon. One of the earliest fields in India was the State of Travancore. Here whole communities have become Salvationists. In the villages around Nagercoil some hundreds of women have been taught lace-making and needlework. At Bangalore, what is generally acknowledged as the premier Silk School in India is established. Scores of Silk and Weaving Masters have been trained there, and due regard is paid to the spiritual welfare of the students. A Home of Rest for Sick Officers is situated in the Nilgiri Mountains. The Catherine Booth Hospital in Travancore, under the skilful direction of Brigadier (Dr.) Turner, has been the centre of the Medical Work in that part of India where Students and Nurses are trained, and where thousands of patients receive attention every year. There are other branch Hospitals and Dispensaries in Madras.

In **Ceylon** the Salvation Army has what is probably the first Beggars' Home in the East. An ordinance was passed and the Salvation Army requested to take charge of the beggars in Colombo. The work of the Home has been most successful. Men permanently incapable find a harbour where they may spend their days in peace, while the curable are medically treated and returned to the ranks of labour. Another special feature in Ceylon is the large proportion of Women-Officers, accounted for by the fact that, unlike their sisters in India, it is not thought strange if Singhalese women remain unmarried. Men's and Women's Training Garrisons regularly receive their quota of Native Cadets.

Corps, 419; Outposts, 636; Officers, 1,058, of whom 962 are natives of India or Ceylon; employees and teachers, 339; Social Institutions 25.

Territorial Headquarters S.A., The Broadway, Madras.

Acting Territorial Commander: Colonel Himmat Singh (Rauch).

A new command to be known as the Eastern Territory is now being formed with headquarters at Calcutta.

ROYAL ARMY TEMPERANCE ASSOCIATION.

In 1862 there was started among the British troops in Agra a small Society, under the leadership of Rev. G. Gregson, Baptist minister, which after a short time took the name of the Soldiers' Total Abstinence Society.

For some ten years the Society struggled with varying success, spreading to other Garrison stations, but at the end of that time, though it had obtained recognition from the Horse Guards, and was the first Society whose Pledge was so recognised, the membership was not more than 1,200. In the year 1873, however, through the influence of the then Commander-in-Chief, the work was placed on a firmer footing, the Rev. Gelson Gregson gave up his whole time to it, and by accompanying the troops through the Afghan War, making an extended tour through Egypt,

and bringing the work into close touch with troops, both during peace and war, in the year 1886, when he left the Society, it numbered about 11,000 members. He was followed by a Madras Chaplain, who after two years gave place to the Rev. J. H. Bateson. In 1886, the late Lord Roberts, Commander-in-Chief, organised his Scheme for Regimental Institutes, which have had a wonderful effect on the life of British soldiers in the East; and the Total Abstinence Society was so far incorporated into the scheme as to be allowed ample accommodation, and many practical benefits, in every Unit. At the same time the name was changed to that of the Army Temperance Association, and the work of various societies thus linked together, under one organisation. The effect has been more than even the inaugurator himself ever hoped for. The membership rose steadily from that date and still increases.

Growth of the Society.—In 1889 there were 12,140 members; in 1899, 20,688; in 1909, 30,220, while in 1913-14, the total was 35,000, or over 45 per cent. of the total garrison in India. In 1908, the Secretary having retired after 20 years' work, the Rev. H. C. Martin, M.A., a Chaplain in Bengal, was selected by H. E. Lord Kitchener, to the post of Secretary. Twenty years ago, the Association, which has now for some years been the Royal Army Temperance Association, with the Patronage of King Edward VII, and later of the King Emperor, George V., organised a similar Society in Great Britain, with headquarters in London, from which the troops in South Africa, the Mediterranean, etc., are controlled, so that the whole British Army receives the attention of the Association.

Varied Activities.—What primarily has been the effort of the Association, namely, the decrease of Intemperance, and promotion of sobriety among soldiers has gradually grown into work of every kind, in the interests of soldiers; promotion of sport, occupation of spare time, assistance towards employment in Civil Life, advice and information on the subject of Emigration, provision of Furlough Homes, all tend to enlist the support of officers and men in the Association, and add to its value to them, and to the efficiency of its work, generally. The wonderful change that in late years has taken place in the character of the British Army, in India especially, is due to various causes, including the increased interest in games and sports the spread of education, the different class of men enlisted, and so on, but the R. A. T. A. has always been given its due share among other causes, by all authorities and Blue Books, and particularly by Officers Commanding Divisions, Brigades and Units. These changes in conduct are seen most plainly in the increased good health of the Army in India.

Effect in the Army.—In the year 1889, 1,174 British soldiers died in India, and 1,800 were invalided unfit for further duty; in 1910, only 330 died, and 484 were invalided In 1889, 688 underwent treatment for Delirium tremens, in 1910, only 37. In conduct the same difference is to be found; as late as 1901 as many as 545 Courts Martial were held on men for offences due to excessive drinking; in 1906 only 217. In 1904, 2,231 good conduct medals were issued; in 1910, there were 4,581. In regard to the character of the men themselves, who become members of the Association, during their service, we find that in 1912, 59 per cent. on transfer from the Colours obtained Exemplary characters, and 93 per cent. either Exemplary or Very Good; the remainder were for the most part men who, after some years of heavy drinking, had towards the end of their service been persuaded to try and reform themselves, but not soon enough to avoid the consequences of previous excess.

Organisation.—The War has necessarily brought increased work upon this society, the results of which were very quickly apparent Capacious reception sheds fitted up in the Docks at Bombay and Karachi, proved of the greatest value to troops moving from India, and to the large number coming in: special arrangements aided by a loan from the Government of India, enabled the R. A. T. A. to organise branches in every Territorial unit immediately on arrival, special attention being paid to small detachments and to the Hill stations. In consequence there were, within a month of the completion of the Garrison, over 70 Territorial Branches, containing nearly 50 per cent. of the new arrivals, and this has increased consistently ever since. During the war in addition to covering all troops from Aden to Singapore, the R. A. T. A. was the only Society working in Mesopotamia. Institutes were opened and the cordial good will of the authorities enabled the R. A. T. A. to provide many amenities to the very trying experiences of that Force. The men relieved, and sent back to India for periodic rest, in addition, received a warm welcome and entertainment at the hands of the Association. The following is the organisation of the Council and management:—

Patron: His Majesty the King Emperor.

President: His Excellency the Commander-in-Chief.

Council

The General Officers, Heads of Departments, Army Headquarters.

The General Officers Commanding Division.

Two Officers Commanding Regiments.

Officers of the R. A. M. C. and I. M. S.

Two Regimental Quartermasters.

Representatives of the various Churches.

Executive Committee.

Major-General P. A. Bainbridge, C.B., C.M.G. President.

Lt.-Col. F. G. Moore.

Lt.-Col. R. Johnston, D. S. O.

General Secretary: Miss V. T. Blanchfield.

Auditor: Nelson, Dignasse & Co.

Bankers: Imperial Bank of India, Ltd. and Alliance Bank of Simla.

Head Office: Talbot House, Simla.

THE TEMPERANCE MOVEMENT.

(By the Rev. Herbert Anderson, Honorary Secretary, Calcutta Temperance Federation.)

The Temperance Movement in India has become, somewhat suddenly, a living political issue. Under the fostering care of the Imperial Government Excise administration had reached the position of being the most satisfactory department for the raising of provincial revenues. From the latest returns submitted to the House of Commons in May 1921, the percentage of Excise revenue collected, to total revenue collected in each Province in 1919-20, was given as follows:—

Province.	Per cent.
Assam	30·0
Central Provinces and Berar ..	26·0
Madras	25·3
Bihar and Orissa	25·6
United Provinces	12·4
Punjab	11·1
Bombay and Sind	11·9
Burma	8·4
Bengal	5·2 *

During the ten years ending 1918-1919 † the net receipts from Excise duties increased from Rs. 9,18,30,000 to Rs 16,37,33,000, the increase being at the rate of 78 per cent. The receipts from opium (consumed in India, not exported) rose from Rs. 1,48,72,000 to Rs. 2,42,25,000 being at the rate of 63 per cent. The net profits from drugs other than opium rose from Rs. 7,69,58,000 to Rs. 13,95,08,000, the increase being at the rate of 81 per cent Consumption as represented by taxation works out to 10 annas and 11 pies per head of the population in British India as against 6 annas 9 pies ten years ago. Under the Constitutional reforms this whole department is transferred to the representatives of the people, and in each Provincial Legislative Council excise administration has become a subject of keen debate. Indian sentiment is on the side of Temperance reform, and action more or less drastic is proposed by all those Councils that have already dealt with the subject.

The Government Policy in its Excise Administration, and the criticism of the Temperance workers are well known. Government permits and controls all manufacture of spirits and other liquors and the preparation of all drugs made in India. It controls all imports of the same commodities. It raises revenue by charging a duty on all intoxicating drugs and drinks and by collecting a licensing fee from every person permitted to engage in the sale of them. It keeps in touch with the demand everywhere of the moderate drinker and drug taker, and while supplying their needs seeks to obtain a maximum revenue from a minimum consumption. The chief matters with which the Excise officials have to deal are the duty and vend fees, the location of shops and hours of sale, the alcoholic strength of drinks and excise crimes.

* This is an error. The Bengal percentage is over 20 per cent.

† Quoted from Statistics of British India. Vol. II, Financial Statistics, 1920.

The Temperance movement aims to make India free from the evils associated with the drink and drug habit. It believes that the leaders of Indian thought and life are right in regarding prohibition as the only remedy. It realises that difficulties, social and financial, make the policy impracticable without some period of educational influence during which a consistent policy of the gradual restriction of consumption should take place. Recent years have shown that public opinion as expressed by Conferences, religious, social and political, is growingly demanding the limitation, with the ultimate abolition of the present system of Excise.

Temperance reformers were surprised at the British Government giving India control over Excise. It was an unexpected answer to thirty years of agitation, appealing for some form of local option. The action was a vindication of the Government of India's claim that the motive of its Excise policy has not been revenue, but aimed at making due provision for the needs of those who desire to take alcohol in moderation, minimizing temptation to those who drink, and discouraging excess among those who do. It also substantiated the democratic character of the political changes introduced under the Montagu-Chelmsford reforms—accepting the principle that in future the policy of Government in all Excise matters must be shaped to accord with the views of the majority of the people.

Organisation.—The Temperance movement, as an organisation in India, was founded thirty-three years ago. The late Mr. W. S. Caine visited India, got into touch with the few and scattered temperance societies then existing, established others, and founded, in 1888, the Anglo-Indian Temperance Association with head-quarters in London. Its last Annual Meeting was held on May 24, 1921. It re-elected as its President Lord Clwyd, who for more than 25 years as Sir Herbert Roberts, M.P., brought influence to bear upon the Indian Government by means of Parliamentary action in the House of Commons. The General Secretary of the Association and Editor of the quarterly magazine "Abkari", is Mr. F. Grubb of "Arkbrook", Home Park Road, Wimbledon, London. He visited India some years ago and has kept the Home Association in touch with the 220 branches of the association in India. Among the active members of the Association Council are the Right Hon'ble J. Herbert Lewis, the Right Hon'ble Lief Jones, Mr. Charles Roberts, Major-General Sir George J. H. Ewatt, K.C.B. Mr. A. Yussif Ali, C.B.E., and Mr. J. M. Parikh.

In India the organisation of Temperance Societies is not strong or efficiently developed. First of all there is affiliation to the Anglo-Indian Temperance Association, above referred to. In cities like Bombay, Calcutta, Lucknow, Madras and Rangoon, Federations and Unions of all Societies have been formed. The number of Societies are in Bombay 24, Calcutta 32, Madras 5, Rangoon 4. These

represent I.O.G.T. Lodges, and the Tenets of the Order of Rechabites, Societies connected with various Samajes, Churches and Missions, the W.C.T.U., Bands of Hope, and other Temperance Organisations. In addition to the City Federations there are Societies at work in about 120 other cities and towns, the most active being in Allahabad, Rangoon, Simla, Darjeeling, Bangalore, Benares, Chicacole, Amritsar, Poona, Ahmedabad, Hoshangabad and Gujranwalla. The **method of propaganda** are similar to those adopted in the West. There are organising lecturers, of whom the most successful during the last year or two has been Miss Mary J. Campbell of the Women's Christian Temperance Union. She has been successful in forming many new Societies, and of enrolling many individual adherents. Indian lecturers whose salaries are aided by the Anglo-Indian Temperance Association, work in Calcutta and one or two other cities, and there is a large number of voluntary workers who by speaking at public meetings, circulating literature in the vernacular and in English, and getting up dramatic entertainments and recitation contests, push Temperance progress in various parts of the country.

The second bond of union for all Temperance Societies in India is the **All India Temperence Conference** which grew out of the Anglo-Indian Temperance Association in 1903. For nearly twenty years it has met annually at the same time and place as the Indian National Congress, but has never had any official connection with it. Delegates are appointed from the various Societies to attend the Conference at which a review of the year's progress is made, and resolutions passed on matters of policy and propaganda. Owing to the split in the Congress Camp no meeting was held in December 1920. Preparations are being made for a meeting at Benares this year. The Hon'ble Pandit Madan Mohan Malaviya is President and Lala Nand Lal of the Amritsar Temperance Society is Secretary, and there is a Council of twenty members representing the Societies of various Provincial areas.

The **attitude of the new Councils** has been favourable to Temperance views. In the Punjab Council by a majority of 39 to 13, on the motion of Mr. K. L. Rallia Ram, it has been decided to apply the principle of local option to the sale of intoxicating liquors, the authority being exercised by Municipalities and District Boards. In the United Provinces Council a strong Committee was appointed to make recommendations. It has suggested such drastic changes as the substitution of a fixed fee system for the auction system of vend, the creation of Licensing Boards in several cities, reduction in the alcoholic strength of country liquor. Mr C. Y. Chintamani, the Minister responsible for the department, intends, he has said, to lose no time in giving effect to the recommendations. In Madras, the Dewan Bahadur M. Ramchandra Rao has introduced a local option bill modelled on the Scottish Temperance Act. Public meetings have been held to support the suggestion. In Bengal the Council is to be asked to appoint a committee to consider and amend the Excise Act with a view to introduce immediate restrictions in the traffic both of liquor and drugs. In Bihar and Orissa the Council would not accept the resolutions moving for the complete suppression of manufacture and sale within a year, but the Local Government, through its Commissioner of Excise, has stated that its policy is directed towards temperance. In other Provincial areas the subject is arousing public interest and the new Legislative Councils may be said generally to be animated by a desire to promote sobriety. The leaders of Indian thought appear to be heading for prohibition, if once the financial difficulties on taxation can be met.

Mr. Ghandhi's Campaign—The outstanding event of the Temperance Movement of 1921 has been Mr. Gandhi's attack on the liquor traffic in general, and on Excise revenue in particular. He claims it is a necessary part of his propaganda of self-purification. He calls the traffic one of the eight injustices the British Empire has done to India. He has interviewed vendors and has urged them to give up for ever the sale of drink. He has permitted his followers to adopt the policy of picketing drink shops in certain parts of the country with disastrous results. There seems little doubt that the object of the non-co-operation movement is not a genuine temperance movement, but an attempt to embarrass the existing Government by suddenly restricting its revenue. Should it succeed, those deprived of liquor against their will, will seek it illicitly, and as illicit liquor can be manufactured for about one-tenth of the price charged under Government control, consumption and drunkenness will be likely to increase. With such facilities as India possesses for illicit distillation, the preventative staff necessary would be large and expensive, and as incidents in the controversy so far have clearly shown, the breaking of Excise laws breeds a spirit of lawlessness and offences against persons and property inevitably follow. Temperance leaders have in the past sought to disassociate themselves from the political aspects of Mr. Gandhi's propaganda. Their methods of agitation have been peaceful and constitutional and will remain so. Any genuine movement—spontaneous or otherwise—among the masses in any part of the country for the promotion of complete abstinence from alcoholic liquors will be welcomed and assisted by those who sympathise with the Temperance Movement. But any resort to unconstitutional or violent action will hinder and not help the Temperance cause.

Warrant of Precedence.

(Corrected to the 1st April 1921.)

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, Empress of India,—

To all to whom these Presents shall come:

WHEREAS it hath been represented unto Us that it is advisable that the rank and precedence of persons holding appointments in the East Indies as regulated by Our Royal Warrant, dated the 18th day of October 1876, should be altered, We do therefore hereby declare that it is Our will and pleasure that in lieu of the table laid down in Our said recited Warrant, the following table be henceforth observed with respect to the rank and precedence of the persons hereinafter named, *viz.*:—

1. Governor-General and Viceroy of India.
2. Governors of Madras and Bombay.
3. President of the Council of the Governor-General.
4. The Governors of the United Provinces, the Punjab, Bihar and Orissa, the Central Provinces and Assam, when in their own territories. Lieutenant-Governor when in his own territories.
5. Commander-in-Chief in India.
6. The Governors of the United Provinces, the Punjab and Bihar and Orissa, when outside their own territories. Lieutenant-Governor when in his own territory, the Governors of the Central Provinces and Assam when outside their own territories.
7. Chief Justice of Bengal
8. Bishop of Calcutta, Metropolitan of India
9. Ordinary Members of the Council of the Governor-General.
10. Commander-in-Chief of His Majesty's Naval Forces in the East Indies. The Presidents of the Council of State and of the Legislative Assembly.
11. Chief Justice of a High Court other than that of Bengal.
12. Bishops of Madras and Bombay.
13. Ordinary Members of Council, in Madras, Bombay and Bengal. Members of Governor's Executive Councils and Ministers within their respective charges. Ministers of the Governors of Madras, Bombay and Bengal when outside their respective charges.
14. General Officers Commanding the Northern and Southern Armies. The Chief of the General Staff; Members of the Executive Councils and Ministers, United Provinces, the Punjab and Bihar and Orissa, when outside their respective charges.
15. Chief Commissioners of the Central Provinces and Assam, Residents at Hyderabad and in Mysore; Agents to the Governor-General in Rajputana, Central India, and Baluchistan. Executive Members of the Council of the Lieutenant-Governor of Bihar and Orissa; Agent to the Governor-General and Chief Commissioner, N. W. F. Province; Members of the Executive Council and Ministers of the Central Provinces and Assam when outside their respective charges; the Vice-President of each Executive Council appointed under Section 48 of the Government of India Act, Presidents of the Legislative Councils when within their respective Provinces.
16. Puisne Judges of a High Court.
17. Chief Judge of a Chief Court.
18. Military Officers above the rank of Major-General.
19. Comptroller and Auditor-General.
20. Additional Members of the Council of the Governor-General for making Laws and Regulations and the Chairman of the Railway Board; the President of the Indian Railway Committee, Mr. Ackworth, and Sir H Burt and Sir A Anderson Members of the Committee to take rank with but immediately after the President.
21. Bishops of Lahore, Rangoon and Lucknow.
22. Secretaries to the Government of India and Joint Secretary to the Government of India in the P. W. D.; the Members of the Railway Board and Joint Secretaries to the Government of India; the Secretary and Members of the Indian Railway Committee.
23. Commissioner in Sind.
24. Judges of a Chief Court, Recorder of Rangoon and Judicial Commissioners, Burma.
25. Chief Secretaries to the Governments of Madras and Bombay.
26. Majors-General, Members of a Board of Revenue, Commissioners of Revenue Customs, Bombay; and Financial Commissioners, Punjab and Burma; Inspector-General of Irrigation; Director-General, Indian Medical Service; the Director of Development, Bombay.
27. Judicial Commissioners, including Additional Judicial Commissioners of Oudh, the Central Provinces and Sind; the Financial Commissioner, Central Provinces.
28. Additional Members of the Councils of the Governors of Madras and Bombay for making Laws and Regulations, and Members of the Legislative Council of a Lieutenant-Governor.
29. Vice-Chancellors of Indian Universities.

FIRST CLASS.

30. Members of the Indian Civil Service of 30 years' standing.
31. Advocates-General, Calcutta, Madras and Bombay.
32. Commissioners of Divisions, the Superintendent of Port Blair, and Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts) within their respective charge; the Revenue and Judicial Commissioner in Baluchistan within British Baluchistan and the Agency territories.
33. Chief Secretaries to Local Governments other than those of Madras and Bombay.

34. Surveyor-General of India, Directors-General of the Post Office, of Telegraphs in India and of Railways, Chief Engineers, first class, Accountant-General, Military and Public Works Departments; Director, Royal Indian Marine, and Manager, North-Western Railway, and Directors of Railway Construction and Railway Traffic.

35. Bishops (not territorial) under license from the Crown.

36. Archdeacons of Calcutta, Madras and Bombay.

37. Brigadiers-General; Consuls-General.

38. Commissioners of Divisions; Revenue and Judicial Commissioner in Baluchistan, when in Kalat or Las Bela or elsewhere outside the limits of his charge.

39. Commissioner of Northern India, Salt Revenue, and Opium Agents, Benares and Bihar and Director, Criminal Intelligence.

40. Secretaries and Joint Secretaries to Local Governments, the Private Secretary to the Viceroy, Members of the Council of a Chief Commissioner.

SECOND CLASS.

41. Members of the Indian Civil Service of 23 years' standing, Colonels and Consuls.

42. Military Secretary to the Viceroy.

43. Judicial Commissioners of the Hyderabad Assigned Districts and Baluchistan; the Superintendent of Port Blair; Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts).

44. Inspector-General of Forests in India; Director of the Geological Survey; Director-General of Education in India; the Sanitary Commissioner with the Government of India.

45. Standing Counsel to the Government of India.

46. Directors of Public Instruction, and Inspectors-General of Police and Prisons under Local Governments, Accountants-General and the Director of the Indian Institute of Science.

47. Survey Commissioner and Director of Land Records and Agriculture, Bombay; Commissioners of Settlements, Controllers of Military Accounts; Military Deputy Auditors-General and Senior Controller of Military Supply Accounts.

48. Chief or Senior Civil Secretary to a Local Administration.

49. Chief Engineers, second and third classes; Deputy Surveyor-General; Deputy Director-General of Telegraphs in India, and Director-in-Chief, Indo-European Telegraph Department, and Secretary to the Railway Board.

50. Divisional and District and Sessions Judges, Collectors and Magistrates of Districts; Deputy Commissioners of Districts; Deputy Superintendent of Port Blair; the Chief Officer of each Presidency Municipality within their respective charges; Officers in charge of the Zhob, Quetta-Pishin and Thal-Chotiali Districts throughout their respective charges, whether British or Agency territory; Judicial Commissioner, Chota Nagpur; Chairmen of the Boards of Trustees for the improvement of the cities of Bombay and Calcutta and President, Rangoon Municipal Committee, within their respective charges.

51. Archdeacons of Lahore, Lucknow, Rangoon and Nagpur.

52. Deputy Secretaries to the Government of India and Director-General of Commercial Intelligence.

53. The Senior Chaplains of the Church of Scotland in Bengal, Madras, and Bombay.

54. Remembrancers of Legal Affairs and Government Advocates under Local Governments; President, Forest Research Institute and College, Dehra Dun, Chief Conservators of Forests.

55. Officers in the First Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service. The Deputy Military Accountant-General and the Junior Controller of Military Supply Accounts.

THIRD CLASS.

56. Members of the Indian Civil Service of 18 years' standing and Lieutenant-Colonels.

57. The Deputy Director, Royal Indian Marine.

58. The Assistant Director, Royal Indian Marine.

59. Commanders and Inspectors of Machinery, Royal Indian Marine.

60. Political Agents and Superintendents drawing less than Rs. 2,000 a month (not being Collectors or Deputy Commissioners of British Districts), District Judges in Lower Burma and Judge of the Small Causes Court, Rangoon, within their respective charges; and Political Agent in Kalat.

61. Secretaries to Local Administrations other than those already specified. The First Assistant to Agent to the Governor-General in Baluchistan; First Assistant to the Resident at Hyderabad and in Mysore and to the Agents to the Governor-General in Rajputana and Central India.

62. Consulting Engineers to the Government of India for Railways; Chief Inspector of Explosives in India and Consulting Architect to the Government of India.

63. Private Secretaries to Governors.

64. Military Secretaries to Governors.

65. Administrators-General.

66. Sanitary Commissioners under Local Governments; Postmasters-General; the Comptroller, Post Office; Conservators of Forests, first grade; Collector of Customs at Calcutta, Bombay, Madras, Rangoon and Karachi.

67. Directors of Public Instruction, Inspectors-General of Police and Prisons under Local Administrations; Comptrollers and Deputy Auditors-General and Deputy Director, Criminal Intelligence.

68. Managers of State Railways other than the North-Western Railway; and Chairmen of Port Trusts, Bombay, Calcutta, Madras and Rangoon.

69. Vice-Chairman of the Port Trust, Calcutta; Directors of Traffic and Constructions, Indian Telegraph Department; Examiners of Accounts, Public Works Department, first class; Officers of the Superior Revenue Establish-

ment of State Railways, first class, first grade; Superintending Engineers, Public Works Department, first class; Superintendents of the Survey of India Department, first grade; Director of Telegraphs, first class; and Electrical Engineer-in-Chief, Telegraph Department; the Chief Examiners of Accounts, North-Western State Railway, Eastern Bengal State Railway and Oudh and Rohilkhand State Railway.

70. Inspectors-General of Registration and Directors of Land Records; Directors of Agriculture and Excise Commissioners under Local Governments, and Registrars of Co-operative Credit Societies under Local Governments, and Comptroller of Patents.

71. Senior Chaplains other than those already specified.

72. Sheriffs within their own charges.

73. Officers in the Second Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

Political Agents and Superintendents in Baluchistan drawing less than Rs. 2,000 when outside their respective charges rank in Article 73 unless their Army rank or standing in the Civil Service gives them a higher place. The same is the case with the Political Agent in Harauti and Tonk. Principals of Government Colleges, Officers of the Indian Agricultural Service, or of the General List of the Indian Finance Department, or of the Public Works Engineer establishment, or of the Superior Revenue establishment of State Railways, or of the Civil Veterinary, Forest, Survey, Mines, Postal, Telegraph, Customs, or Scientific Departments, or officers of the Indian Institute of Science, or Sanitary Engineers, not being Superintending Engineers, or Consulting Architects to Local Governments, drawing Rs. 1,250 month and upwards, officers of the Police Department drawing Rs. 1,200 a month and upwards, Divisional Controllers of Military Accounts, Director of Survey, Madras Electrical Adviser to the Government of India, Judicial Commissioner, Chota Nagpur and Secretary to the Bengal Legislative Council and Assistant Secretary to the Government of Bengal in the Legislative Department; Director of Statistics, Consulting Surveyor to the Government of Bombay.

FOURTH CLASS.

74. Members of the Indian Civil Service of 12 years' standing, and Majors; District Judges in Lower Burma and Judge of the Small Cause Court, Rangoon, when without their respective charges; Vice-Consuls.

75. Lieutenants of over 8 years' standing and Chief Engineers of the Royal Indian Marine.

76. Government Solicitors.

77. Inspectors-General of Registration; Sanitary Commissioners; and Directors of Land Records and Agriculture under Local Administrations; the Chief Accountant and the Deputy Accountant in the office of the Director of Ordnance Factories; Registrars of Co-operative Credit Societies and Excise Commissioner under Local Administration.

78. Officers in the Third Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service, Principals of Government Colleges, officers of the Indian Educational Service and the graded Educational Service or of the Indian Agricultural Service, or Sanitary Engineers or Consulting Architects, or Electrical Inspectors, drawing Rs. 1,000 a month and upwards; and officers of the General List of the Finance Department, or officers of the higher branch of the Military Accounts Department, or of the Public Works Engineer establishment, or of the Superior Revenue establishment of State Railways, or of the Civil Veterinary, Forest, Survey, Police, Mines, Postal, Telegraph, Customs, or Scientific Departments, drawing Rs. 900 a month and upwards; Assistant Commissioners, Northern India, Salt Revenue, drawing Rs. 800 a month and upwards; Chemical Examiner for Customs and Excise, Collector of Income-Tax, Calcutta, Director, Vaccine Institute, Belgaum; First Assistant Superintendent, Port Blair; Legal Assistant in the Legislative Department of the Government of India; officers of the Archæological Department, drawing Rs. 800 a month and upwards; officers of the Excise and Salt Departments, drawing Rs. 800 a month and upwards; officers of the Provincial Services of not less than 18 years' standing, drawing Rs. 600 a month and upwards; Registrar to the Chief Court, Lower Burma; and Secretary to the Board of Revenue in the Department of Revenue Settlement, Survey, Land Records and Agriculture, Madras, when a member of the Provincial Civil Service, in Article 78.

The entries in the above table apply exclusively to the persons entered therein, and, while regulating their relative precedence with each other, do not apply to the non-official community resident in India, the members of which shall take their place according to usage.

Officers in the above table will take precedence in order of the numbers of the entries. Those included in one number will take precedence *inter se* according to the date of entry into that number.

When an officer holds more than one position in the table, he will be entitled to the highest position accorded to him.

Officers who are temporarily officiating in any number in the table will rank in that number below permanent incumbents.

All officers not mentioned in the above table, whose rank is regulated by comparison with rank in the army, to have the same rank with reference to civil servants as is enjoyed by Military Officers of equal grades.

All other persons who may not be mentioned in this table, to take rank according to general usage, which is to be explained and determined by the Governor-General in Council in case any question shall arise.

Nothing in the foregoing Rules to disturb the existing practice relating to precedence at Native Courts, or on occasions of intercourse with Natives, and the Governor-General in Council to be empowered to make rules for such occasions in case any dispute shall arise.

All ladies to take place according to the rank herein assigned to their respective husbands

with the exception of wives of Peers, and of ladies having precedence in England independently of their husbands, and who are not in rank below the daughters of Barons; such ladies to take place according to their several ranks, with reference to such precedence in England, immediately after the wives of Members of the Council of the Governor-General.

Given at Our Court at Windsor this tenth day of December, in the year of Our Lord One thousand eight hundred and ninety-eight, and in the sixty-second year of Our Reign.

By Her Majesty's Command.

(Signed) GEORGE HAMILTON.

Supplementary Graded List of Civil Offices not Reserved for Members of the Indian Civil Service prepared under the orders of the Governor-General in Council.

*FIRST CLASS—(No. 55 of the Warrant).

Assay Masters of the Mint, Calcutta and Bombay.

Chief Judges of Presidency Courts of Small Causes.

Commissioners of Police, Calcutta, Madras, Bombay, and Rangoon.

Controller of Printing and Stationery.

Deputy Comptroller-General.

Director-General of Archæology.

Director of the Botanical Survey of India.

Inspector-General of Agriculture in India.

Masters of the Mint, Calcutta and Bombay.

Meteorological Reporter to the Government of India.

Superintendent of Revenue Survey, Madras.

Superintendent, Trigonometrical Surveys.

SECOND CLASS.—(No. 73 of the Warrant).

Actuary to the Government of India.

Adviser on Chinese Affairs in Burma.

Agent General in India for the British Protectorates in Africa under the Administration of the Foreign Office.

Chief Collector of Customs, Burma.

Chief Constructor of the Royal Indian Marine Dockyard at Bombay.

Chief Inspector of Mines in India.

Chief Presidency Magistrates.

Chief Superintendents of the Telegraph Department.

Collector of Customs and Salt Revenue, Sind.

Collectors and Magistrates of Districts; and Deputy Commissioners of Districts and of Settlements.

Conservators of Forests, 2nd and 3rd Grades.

Deputy Accountants-General under Local Governments.

Deputy Directors of Telegraphs.

Deputy Inspectors-General of Police.

Deputy Superintendent of Port Blair.

Directors of the Persian Gulf Section, and of the Persian Section of the Indo-European Telegraph Department.

Directors of Telegraphs, 2nd, 3rd and 4th Classes.

Divisional and District and Sessions Judges.

Examiners of Accounts, Public Works Department, 2nd and 3rd Classes.

Government Astronomer, Madras.

Government Emigration Agents at Calcutta for British Guiana and Natal, and for Trinidad, Fiji, Jamaica and Mauritius.

Imperial Bacteriologist.

Inspector of Mines to the Government of India.

Librarian, Imperial Library.

Officer in charge of the Records of the Government of India.

Officers of the Indian Educational Service, and of the graded Educational Service drawing Rs. 1,250 a month and upwards.

Officers of the Superior Revenue Establishment of State Railways, 1st Class, 2nd and 3rd Grades.

Principal of the Mayo College, Ajmere.

Principal of the Rajkumar College, Rajkot.

Reporter on Economic Products.

Superintendent of the Royal Botanical Gardens, Calcutta.

Superintendents Geological Survey of India.

Superintendents of Revenue Survey and Assessment, Bombay.

Superintendents of the Survey of India Department, 2nd Grade.

Superintending Engineers, Public Works Department, 2nd and 3rd Classes.

Under-Secretaries to the Government of India.

*THIRD CLASS—(No. 78 of the Warrant).

Agricultural Chemist.

Assistant Director of Dairy Farms.

Assistant Inspector-General of Forests.

Assistant Secretaries to the Government of India.

Chief Chemical Examiner, Central Chemical Laboratory, Naini Tal.

Collector of Stamp Revenue, Superintendent of Excise Revenue, and Deputy Collector of Land Revenue, Calcutta.

Commander of the steamer employed in the Persian Gulf Section of the Indo-European Telegraph Department.

Constructors of the Royal Indian Marine Dockyards at Bombay and Kidderpore.

* The entries in each case are arranged in alphabetical order.

Deputy Administrator-General, Bengal.

Deputy Collector of Salt Revenue, Bombay

Deputy Commissioner of Northern India, Salt Revenue.

Deputy Commissioners of Police, Calcutta and Bombay.

Deputy Commissioner of Salt, Abkari and Customs Department, Madras.

Deputy Conservators of Forests drawing Rs 800 a month and upwards.

Deputy Directors of Land Records and Agriculture, Madras and Burma.

Deputy Director of the Imperial Forest School, Dehra Dun.

Deputy Directors of Revenue Settlements and Deputy Superintendents of Revenue Surveys, Madras.

Deputy Postmasters-General of the 1st, 2nd and 3rd Grades.

Deputy Superintendents, Geological Survey of India.

Deputy Superintendents, Survey of India Department.

District Superintendents of Police drawing Rs. 800 a month and upwards.

Engineer and Electrician of the Persian Gulf Section of the Indo-European Telegraph Department.

Examiners of Accounts, Public Works Department, 4th Class, 1st and 2nd Grades.

Executive Engineers, Public Works Department, 1st and 2nd Grades.

Inspector-General of Railway Mail Service.

Judge of the City Civil Court, Madras.

Judges of Presidency Courts of Small Causes, and First Judge of the Small Cause Court, Rangoon.

Manager of the Cordite Factory, Aruvankadu.

Officers of the Indian Educational Service and of the Graded Educational Service drawing less than Rs 1,250 a month but more than Rs. 1,000 a month.

Officers of Superior Revenue Establishments of the State Railways, 2nd class, 1st and 2nd Grades.

Palæontologist, Geological Survey of India.

Presidency Magistrates.

Protector of Emigrants and Superintendent of Emigration, Calcutta.

Public Prosecutor in Sind.

Registrars to the High Courts and to the Chief Court, Punjab.

Sub-Deputy Opium Agents, drawing Rs. 800 a month and upwards.

Superintendent of Land Records and Agriculture in Sind.

Superintendent of the Indian Museum.

Superintendent of Stamps and Stationery.

Superintendents, Telegraph Department, 1st and 2nd Grades.

Under the orders of Her Majesty's Secretary of State for India, the following table showing the relative rank of officers in the Army, Royal Navy, and Royal Indian Marine is attached to the Warrant of Precedence for India, published with Home Department Notification No. 328, dated the 10th February 1899.—

	Captains under 3 years and officers of corresponding rank, Royal Navy.	
Lieut.-Cols.	Deputy Director, Royal Indian Marine. Assistant Director, Royal Indian Marine. Commanders, Royal Navy. Commanders, Royal Indian Marine. Staff Commanders and officers of corresponding rank, Royal Navy Inspectors of Machinery, Royal Indian Marine. Chief Engineers, Royal Indian Marine.	But junior to all Lieutenant-Colonels.
	Lieutenants of 8 years' seniority and officers of corresponding rank, Royal Navy.	
Majors.	Lieutenants, Royal Indian Marine, over 8 years' seniority Engineers, Royal Indian Marine, of and over 9 years' seniority.	But junior to all Majors.
Captains.	Lieutenants under 8 years and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, under 8 years' seniority. Engineers, Royal Indian Marine, under 9 years' seniority	But junior to all Army Captains.
Lieuts.	Sub-Lieutenants and officers of corresponding rank, Royal Navy. Sub-Lieutenants, Royal Indian Marine Assistant Engineers, Royal Indian Marine.	But junior to all Lieutenants.

NOTE:—Officers of the Royal Navy Reserve rank with but after officers of the Royal Navy and Royal Indian Marine of their corresponding rank.

SALUTES.

The following is the official table of salutes in Indian Territories—a term which includes all the waters of India within three miles of the coast. "Indian seas," within which some of the salutes are to be given, extend from the North-West entrance of the Straits of Malacca to Cape Comorin, excepting Ceylon, and from Cape Comorin to Aden, including the Maldive and Laccadive Islands, and the Persian Gulf.

Persons.	No. of Guns.
Imperial Salute	101
The King and Emperor when present in person	101
Members of the Royal Family	31
Royal Standard and Royal Salute	31
Royal Salute—On the Anniversaries of the Birth, Accession and Coronation of the Reigning Sovereign, the Birthday of the Consort of the Reigning Sovereign; the Birthday of the Queen-Mother; Proclamation Day	31
Viceroy and Governor-General in India.	31
Independent Asiatic Sovereigns	21
Other Foreign Sovereigns	21
Members of their Families and their Standards	21
Ambassadors	19
Governors of Presidencies	17
The President of the Council of India	17
Governor-General of Portuguese Settlements in India	17
Governor of Pondicherry	17
Governors of His Majesty's Colonies	17
Lieutenant-Governors of Provinces in India	15
Commander-in-Chief in India (If a Field Marshal)	19
Commander-in-Chief in India (If a General)	17
Commander-in-Chief of His Majesty's Naval Forces	
Generals and Admirals, or their Flags	15
Members of the Viceroy's Council	15
Plenipotentiaries and Envoys	15
Lieut.-Governors of His Majesty's Colonies	15
Vice-Admirals, Lieut.-Generals, or their Flags	13
Agents to the Viceroy and Governor-General	13
Agent to the Governor of Bombay in Kathiawar	13
Residents	13
Chief Commissioners of Provinces, and Commissioner of Sind	13
Members of the Executive Council of a Local Government	13
Rear-Admirals and Major-Generals, or their Flags	11
Political Agents and Charges d'Affaires	11
Commodores of the first-class, and Brigadier-Generals	9
The Portuguese Governor of Damaun	9
The Governor of Diu	9
Return salutes to Foreign Men-of-war	
Return salutes to Captains of the Navy, and Naval Officers of inferior rank	1

Permanent Salutes to Chiefs.

Salutes of 21 *guns.*

Baroda. The Maharaja (Gaekwar) of.
Gwalior. The Maharaja (Scindia) of.
Hyderabad. The Nizam of.
Jammu and Kashmir. The Maharaja of.
Mysore. The Maharaja of.

Salutes of 19 *guns*

Bhopal. The Begam (or Nawab) of
Indore. The Maharaja (Holkar) of.
Kalat. The Khan (Wali) of.
Kolhapur. The Maharaja of
Travancore. The Maharaja of.
Udaipur (Mewar). The Maharana of.

Salutes of 17 *guns.*

Bahawalpur. The Nawab of
Bharatpur. The Maharaja of
Bikaner. The Maharaja of.
Bundi. The Maharao Raja of.
Cochin. The Raja of.
Cutch. The Maharao of
Jaipur. The Maharaja of.
Jodhpur (Marwar). The Maharaja of.
Karauli. The Maharaja of.
Kotah. The Maharao of.
Patiala. The Maharaja of.
Rewa. The Maharaja of.
Tonk. The Nawab of.

Salutes of 15 *guns.*

Alwar. The Maharaja of.
Banswara. The Maharawal of.
Bhutan. The Maharaja of.
Datia. The Maharaja of.
Dewas (Senior Branch). The Maharaja of.
Dewas (Junior Branch). The Maharaja of.
Dhar. The Maharaja of.
Dholpur. The Maharaj Rana of.
Dungarpur. The Maharawal of.
Idar. The Maharaja of.
Jaisalmer. The Maharawal of.

Khairpur. The Mir of.
Kishangarh. The Maharaja of.
Orchha. The Maharaja of.
Partabgarh. The Maharawal of.
Rampur. The Nawab of.
Sikkim. The Maharaja of.
Sirohi. The Maharao of.

Salutes of 13 *guns.*

Benares. The Maharaja of.
Bhavnagar. The Maharaja of.
Cooch Behar. The Maharaja of.
Dhrangadhra. The Maharaja of.
Jaora. The Nawab of.
Jhalawar. The Maharaja-Rana of.
Jind. The Maharaja of.
Junagadh (or Junagarh). The Nawab of.
Kapurthala. The Maharaja of.
Nabha. The Maharaja of.
Navanagar (or Nawanagar). The Maharaja of
Palanpur. The Nawab of.
Porbandar. The Maharaja of.
Rajpipla. The Maharaja of.
Ratlam. The Raja of.
Tripura. The Maharaja of.

Salutes of 11 *guns.*

Ajaigarh. The Maharaja of.
Alirajpur. The Raja of.
Baoni. The Nawab of.
Bijawar. The Maharaja of.
Barwani. The Rana of.
Bilaspur (Kahlur). The Raja of.
Cambay. The Nawab of.
Chamba. The Raja of.
Charkhari. The Maharaja of.
Chhatarpur. The Maharaja of.
Faridkot. The Raja of.
Gondal. The Thakur Saheb of.
Janjira. The Nawab of.
Jhabua. The Raja of.
Jhalawar. The Maharaja-Rana of
Maler Kotla. The Nawab of.
Mandi. The Raja of.
Manipur. The Maharaja of.
Morvi. The Thakur Saheb of.
Narsinghgarh. The Raja of.
Panna. The Maharaja of.
Pudukkottai. The Raja of.
Radhanpur. The Nawab of.
Rajgarh. The Raja of.
Sailana. The Raja of.
Samthar. The Raja of.
Sirmur (Nahan). The Maharaja of.
Sitamau. The Raja of.
Suket. The Raja of.
Tehri (Garhwal). The Raja of.

Salutes of 9 *guns.*

Banganapalle. The Nawab of.
Balasinor (or Vadasinor). The Nawab (Babi) of.
Bansda. The Raja of.
Baraundha. The Raja of.
Bariya. The Raja of.
Chhota Udepur (or Mohan). The Raja of.
Danta. The Maharana of.
Dharampur. The Raja of.
Dhrol. The Thakur Saheb of.
Fadthli (Shukra). The Sultan of.
Hsipaw. The Sawbwa of.
Jawhar. The Raja of.
Kalahandi. The Raja of.
Kengtung. The Sawbwa of.
Khilchipur. The Rao Bahadur of.
Kishn and Socotra. The Sultan of.
Lahej (or Al Hauta). The Sultan of.
Limbdi (Limri). The Thakor Saheb of.
Loharu. The Nawab of.
Lunawara (or Lunawada). The Raja of.
Malhar. The Raja of.
Mayurbhanj. The Maharaja of.
Möng Nai. The Sawbwa of.
Mudhol. The Chief of.
Nagod. The Raja of.
Palitana. The Thakor Saheb of.
Patna. The Maharaja of.
Rajkot. The Thakor Saheb of.
Sachin. The Nawab of.
Sangli. The Chief of.
Savantvadi. The Sar Desai of.
Shehr and Mokalla. The Sultan of.
Sonpur. The Raja of.
Sunth. The Raja of.
Vankaner (or Wankaner). The Raj Saheb of.
Wadhwan (or Vadwan). The Thakor Saheb of.
Yawnghwe (or Nyaungywe). The Sawbwa of.

Personal Salutes.

Salutes of 21 *guns.*

Indore. His Highness Maharajadhiraja Raj Rajeshwar Sawai Sir Tukoji Rao Holkar Bahadur, G.C.I.E., Maharaja of.

Jaipur. Honorary Major-General His Highness Maharajadhiraja Sir Sawai Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., G.B.E., LL.D., Maharaja of.

Kalat. His Highness Mir Sir Mahmad Khan, G.C.I.E., Wali of.

Kolhapur. Honorary Colonel His Highness Sir Shahu Chhatrapati Maharaj, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.

Travancore. His Highness Sri Maharaja Raja Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Udaipur (Mewar). His Highness Maharajadhiraja Maharana Sir Fatch Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., Maharana of.

Salutes of 19 *guns.*

Bikaner. Honorary Major-General His Highness Maharaja Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., K.C.B., A.D.C., Maharaja of.

Kotah. Honorary Lieutenant-Colonel His Highness Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., G.B.E., Maharao of.

Mysore. Her Highness Maharani Kempa Nanjammanni Avaru Vanivilas Sannidhana, C.I., Maharani of.

Nepal. Honorary General His Highness Maharaja Sir Chandra Shumshere Jung Bahadur, Rana, G.C.B., G.C.S.I., G.C.M.G., G.C.V.O., D.C.L., Prime Minister, Marshal of.

Patiala. Honorary Major-General His Highness Maharajadhiraja Sir Bhupendar Singh Mahindar Bahadur, G.C.I.E. G.B.E., Maharaja of.

Tonk. H. H. Amin-ud-Daula Wazir-ul-Mulk Nawab Sir Mahmmud Ibrahim Ali Khan Bahadur Saulat Jang, G.C.S.I., G.C.I.E., Nawab of.

Salutes of 17 *guns.*

Alwar. Hon. Colonel His Highness Sawai Maharaja Sir Jey Singh Bahadur, G.C.I.E., K.C.S.I., Maharaja of.

Dholpur. Honorary Major His Highness Rais-ud-Daula Sipahdar-ul-Mulk Maharajadhiraja Sri Sawai Maharaj Rana Sir Udaibhan Singh Lokindar Bahadur Diler Jang Jai Deo, K.C.S.I., Maharaja Rana of.

Kishangarh. Honorary Lieutenant-Colonel His Highness Umdae Rajahae Baland Makan Maharajadhiraja Sir Madan Singh Bahadur, K.C.S.I., K.C.I.E., Maharaja of.

Orchha. His Highness Maharaja Mahindra Sawai Sir Pratap Singh Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Pratap Singh Bahadur, Honorary Lieutenant-General His Highness Maharaja Sir, G.S.C.B., G.C.S.I., G.C.V.O.,, A.D.C., Regent of Jodhpur.

Sirohi. His Highness Maharajadhiraja Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.S.I., Ex-Maharao of.

Salutes of 15 *guns.*

Benares. Honorary Lieutenant-Colonel His Highness Maharaja Sir Parbhu Narayen Singh Bahadur, G.C.I.E., Maharaja of.

Jind. Honorary Lieutenant-Colonel His Highness Maharaja Sir Ranbir Singh Rajendra Bahadur, G.C.I.E., K.C.S.I., Maharaja of.

Junagadh (or Junagarh). His Highness Vali Ahad Mohabat Khanji, Rasulkhanji, Nawab of.

Kapurthala. Honorary Lieutenant-Colonel His Highness Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., Maharaja of.

Navanagar (or Nawanagar). Honorary Lieutenant-Colonel His Highness Maharaja Shri Sir Ranjitsinhji Vibhaji, K.C.S.I., Maharaja of.

Rampur. Honorary Colonel His Highness Nawab Sir Muhammad Hamid Ali Khan Bahadur, G.C.I.E., G.C.V.O., A.D.C., Nawab of.

Saluie of 13 *guns.*

Janjira. His Highness Sir Ahmad Khan G.C.I.E., Nawab of.

Salutes of 11 *guns.*

Aga Khan, His Highness Aga Sir Sultan Muhammad Shah, G.C.S.I., G.C.I.E., of Bombay.

Bariya. Honorary Captain H. H. Maharawal Sri Ranjitsinhji Mansinhji, Raja of.

Bhor. His Highness Meherban Shanker Rav Chimnaji, Pant Sachiv of.

Chitral. His Highness Mehtar Sir Shuja-ul Mulk, K.C.I.E., Mehtar of.

Dharampur. H. H. Maharana Shri Mohandevji Narandevji, Raja of Lunawada, H. H. Maharana Shri Sir Wakhatsinhji Dalelsinghji, K.C.I.E., Raja of.

Sachin. Honorary Captain His Highness Nawab Ibrahim Mohamed Yakub Khan, Nawab of.

Shehr and Mokalla. His Highness Sultan Sir Ghalib bin Awadth Al-Kayti, K.C.I.E., Sultan of.

Vankaner (or Wankaner). Honorary Captain His Highness Raj Saheb Sir Amarsinhji Banesinhji, K.C.I.E., Raj Saheb of.

Salutes of 9 *guns.*

Dashahr. Raja Padam Singh, Raja of.

Dthala. Amir Nasr bin Ghaigfin Sef bin Abdul Hadi, Amir of.

Jamkhandi. Honorary Captain Meherban Sir Parashramrav Ramchandrarav, K.C.I.E., Chief of.

Kanker. Maharajadhiraja Kanal Deo, Chief of.

Las Bela. Mir Kamal Khan, C.I.E., Jam of.

Loharn. Nawab Sir Amir-ud-din Ahmad Khan Bahadur, K.C.I.E., ex-Nawab of.

Tawngpeng. H. Kun Hsang Awn, K.S.M., Sawbwa of.

Local Salutes.

Salutes of 21 *guns.*

Bhopal. The Begam (or Nawab of). Within the limits of her (or his) own territories, permanently.

Indore. The Maharaja (Holkar) of. Within the limits of his own territories, permanently.

Udaipur. (Mewar). The Maharana of. Within the limits of his own territories, permanently.

Salute of 19 *guns.*

Bharatpur. The Maharaja of.
Bikaner. The Maharaja of.
Cutch. The Maharao of.
Jalpur. The Maharaja of.
Jodhpur. The Maharaja of.
Patiala. The Maharaja of.
(Within the limits of their own territories, permanently.)

Salute of 17 *guns.*

Alwar. The Maharaja of.
Hairpur. The Mir of.
(Within the limits of their own territories permanently).

Salutes of 15 *guns.*

Benares. The Maharaja of.
Bhavnagar. The Maharaja of.
Jind. The Maharaja of.
Junagadh. The Nawab of.
Nabha. The Maharaja of.
Nawanagar. The Maharaja of.
Ratlam The Raja of.
(Within the limits of their own territories, permanently).

Salutes of 13 *guns.*

Janjira. The Nawab of. (Within the limits of his own territories, permanently.)
His Excellency the Governor of Bushire. At the termination of an official visit.

Salutes of 12 *guns.*

His Excellency Shaikh Sir Khazal Khan, G.C.I.E. K.C.S.I., Shaikh of Muhammerah.

Salute of 11 *guns.*

His Excellency Shaikh Sir Isa bin Ali al Khalifah, K.C.I.E., C.S.I. Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf on the termination of an official visit by this Chief.

Savantvadi. The Sar Desai of (Within the limits of his own territory, permanently.)

Salutes of 5 *guns.*

The Shaikh of Muhammerah. Fired by British ships of War in the Persian Gulf at the termination of an official visit by these Chiefs

The Shaikh of Kuwait. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf after the termination of an official visit by this Chief.

The Shaikh of Abu Dhabi. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Muhammerah. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

Eldest son of the Shaikh of Kuwait. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

The Governor of Muhammerah. At the termination of an official visit.

The Governor of Bunder Abbas. At the termination of an official visit.

The Governor of Lingah. At the termination of an official visit.

Salutes of 3 *guns.*

The Shaikh of Dibai. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Shargah. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ajman. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Umm-ul-Qaiwain. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ras-al-Kheima. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Bahrain. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

Routes between India and Europe.

The Indian port for the direct journey to and from Europe is Bombay. There are ordinarily four lines of steamers by which the journey to and from the West *via* Bombay can be performed, either by sea all the way, or—and in some cases only—by sea part of the way and by rail across Europe. They are the P. & O., the Anchor Line, the City and Hall Line, and the Lloyd Triestino. The British India line also has an occasional service to London. The Natal line steamers are available for Western passages only, the steamers sailing round the Cape on their Eastward voyages. There are ordinarily other services between Calcutta and the West, by steamers sailing round Ceylon, and several lines connect Colombo with Europe. Of the latter the Orient, the Messageries Maritimes and the Bibby Lines are the chief, besides the P. & O. The Bibby and Henderson services extend to Rangoon. The new railway between India and Ceylon greatly increases the importance of the Colombo route for Southern India. The shortest time between London and Bombay is 14 days. The following are the fares which are convertible at approximately current rates of exchange:—

Peninsular and Oriental S. N. Co.

Fares from Bombay or Karachi.	1st Saloon.			2nd Saloon.	
	A Rate £	B Rate £	C Rate. £	A Rate £	B Rate £
Free passages (single and return) are granted between Karachi and Bombay by British India Steamer.					
To Plymouth or London by sea, Single	90	84	78	72	66
„ „ Return	157	147	137	126	115
To Marseilles, Malta or Gibraltar, Single	86	80	74	70	64
„ „ Return	150	140	130	123	112
From Calcutta.	76	..	..	64	..

By the **British India S. N. Co.**, fares to London by sea from Bombay or Madras are:—single 1st saloon £72; 2nd saloon £60. Return £126 and £105. Bombay to Marseilles £68, and 2nd saloon £58. Return: £119 and £102.

By the **Anchor Line** fares to Liverpool from Bombay or Karachi are:—1st saloon £70 single and £122 return. To Marseilles:—£66 and (return from Liverpool) £118.

By Ellerman's "**City**" and "**Hall**" **Lines** fares from Bombay or Karachi to Liverpool, 1st saloon are:—single £73, return £128 2nd saloon single £58, return £101. From Bombay or Karachi to Marseilles 1st saloon single £69, return £121. 2nd saloon single £55, return £96. Calcutta to London, 1st saloon single £74, return £129. 2nd saloon single £60, return £105.

By **Bibby Line** fares from Rangoon to London, 1st saloon are:—single £82, return £142-10. Rangoon to Marseilles, 1st saloon single £78, return £135-10.

By **Henderson Line** fares from Rangoon to Liverpool, 1st saloon are:—single £70, return (available for 4 months) £105, (available for 2 years) £125.

By **Lloyd Triestino Line** fares from Bombay or Karachi to Brindisi, Venice or Trieste are:—1st class £74, 2nd class £64. Return rates available for 1 year at one and three-fourth fares.

By **Marittima Italiana** (Italian Mail S. N. Co.) fares from Bombay to Catania, Messina, Naples Leghorn and Genoa are:—Saloon class single £65, 3rd class £28.

INDIAN TRAIN SERVICE.

The distances and railway fares from Bombay to the principal centres of other parts of India are as follow :—

——	Miles.	1st Class.	2nd Class.
		Rs. a.	Rs. a.
Delhi, B. B. & C. I. Railway, *via* new Nagda-Muttra direct route	865	93 5	46 10
Delhi, G. I. P. Railway, *via* Agra	957	93 5	46 10
Simla *via* Delhi	1,137	130 6	66 2
Calcutta, G. I. P. from Bombay, *via* Jubbulpore & Allahabad	1,349	122 10	61 6
Calcutta, G. I. P. from Bombay, *via* Nagpur..	1,223	114 10	57 6
Madras, G. I. P. from Bombay, *via* Raichur	794	93 4	46 9
Lahore, *via* Delhi	1,162	121 3	60 9

THE SUEZ CANAL.

The annual report of the **Suez Canal Company** published shows that during 1920 there were 4,009 passages, representing a net tonnage of 17,574,657 tons, an increase over the preceding year of 23, but still a decrease of 1,076 passages and 2,459,227 tons, or 12·27 per cent., compared with 1913. Three passages have been made by vessels of more than 23,000 tons gross, a figure that has never yet been reached, and one of the ships had a length of 204 metres, the longest ever registered in the Canal. The average time for the transit has risen from 16h. 13 min. to 16h. 28 min. due entirely to causes outside the canal's working. The number of passengers reached 500,147, about the same as the previous year. There were fewer military passengers by 127,675. The quantity of goods shipped increased by 22 per cent. over the year 1919, and is only 34 per cent. below the year 1913. The improvement has been exclusively from North to South, principally machinery, railway material, cement and cloth. The heavy decrease is most marked in English coal during 1919, and does not represent a tenth of the amount of pre-war times. The movement South to North progresses but slowly from 10,211,000 to 10,729,000 tons. Food stuffs, formerly passing in large quantities, have diminished sensibly, thus corn from India is scarcely seen, and Australian corn only totalled 600,000 tons against 1,100,000 tons during the preceding year. There is, however, a compensating traffic from other sources, corn from Manchuria and China, sugar, manganese, jute, India rubber, and particularly coal from South Africa and Australia, sent to make good the deficiency of the European supply.

Besides the resumption of commercial activity through the Canal a progressive re-establishment of the postal services has contributed appreciably to the growth of tonnage.

Apportionment of Tonnage.—Particulars published in the Report of the Suez Canal Company show that by far the largest users of the Canal in 1920 were vessels flying the British flag. Grouping associated lines together, the first places were taken by the P. and O. group, Messrs. Alfred Holt and Company, and the Ellerman Lines. The following table shows the tonnages and numbers of voyages of the first six users in point of tonnage :—

Name.	Tonnage.	No. of Voyages.
P. and O. .. .. British India .. .. Edward Hain and Mercantile Companies.. Other lines of the group	2,074,000	388
Alfred Holt and Co. (Ocean S. S. Company and China Mutual).	1,151,000	227
Ellerman { Hall Line, City Line, Bucknall Line, Wilson Line, Other Ships. }	1,112,000	223
T. and J. Brocklebank..	614,000	114
Nippon Yusen Kaisha ..	589,000	126
Stoomvaart Maatschappij Nederland	552,000	110

In all 36 groups and individual ownerships are mentioned. Finally, under the heading of "Other Lines and Government fleets" there is given a total of 5,582,000 tons, represented by 1,509 voyages.

Worthy of note was the ever-increasing number of ships flying the flags of Japan and the United States. The Japanese flag represented before the war 1·7 per cent. of the tonnage, and reached in 1920 9·1 per cent., passing thus from the sixth to the second rank, whilst the United States, formerly seen but merely, now takes fifth rank with 4·1 per cent. The British flag, still in the first rank, represents 61·7 per cent. of the total.

The dues which the Canal Company was authorised to charge by its concession of 1856 were 10 francs a ton, charged on the gross register tonnage. To these objections were soon raised and as the result of an international Conference at Constantinople in 1873 the dues were fixed at 10 francs per net register ton with a surtax of 4 francs—afterwards reduced to 3. British shipowners still found the dues excessive and a meeting of their representatives and those of the Canal Company in 1883 agreed that in 1885 the dues should be reduced to 9½ francs a ton, that subsequently they should be lowered on a sliding scale as the canal dividend increased, and that after the dividend reached 25 per cent. all the surplus profits should be applied in reducing the rates until they were lowered to 5 francs a ton. Under this arrangement dues were fixed at 7¾ francs per ton at the beginning of 1906, and at the outbreak of war were as low as 6¼ francs a ton, where they remained until October, 1916, when they were raised by ¼ franc a ton. An increase of 20c. per ton of 40 cubic feet in the dues of ships in ballast, took effect from 1st Jan. 1918, the effect of which was to bring the rates for laden and empty ships to the same level—81.50c. which as the dues are payable at the rate of 26f. 40c. to the £, is equivalent to 6s. 5d.

The report issued in 1920 stated that the receipts over expenses had attained the unusual sum of 191,472,665 f. The increase of transit receipts, compared with 1913, due to the higher tariff charges of 1916 and 1917, had barely covered the increase in expenses; the traffic, although showing further progress over the preceding year, was very much less than before the war. The situation would therefore not have been so good as then if it were not for an element of profit of a quite special character which showed itself on a lesser scale in 1919, viz., the benefits of the exchange. This in 1920 amounted to 101,772,711f. 76 c. This profit was made by the company in changing francs (notes) for money less depreciated in Egypt, where shipping dues are payable, and in payments made outside Egypt, particularly in London.

The total receipts for 1920 amounted to 267,460,679f., an increase over 1919 of 82,752,284f. The increase in transit dues was 6,824,706f., but receipts from accessory sources show a decrease of 458,323f.

Improvement Schemes.—It was announced in 1914 that from and after January 1st, 1915, **the maximum draught of water** allowed to ships going through the **Suez Canal** would be increased by 1ft., making it 30ft English.

The maximum permissible draught of ships using the Canal was 24·4 feet in 1870; in 1890 ships drawing 25·4 feet could make the passage; and during the following 24 years the increase has been at the average rate of about 1 foot every six years, thus bringing the maximum draught authorized to 29 feet.

The scheme of improvement adopted by the Company on the recommendation of the International Consultative Committee of Works, the British representatives on which are Sir William Matthews and Mr. Anthony Lister, is a comprehensive one, and the details suggest that it will meet the needs of the big ship.

A **40 feet Channel.**—The declared policy of the Canal Company in regard to the deepening of the Canal is to offer a slightly greater depth of water than that available in ports east of Suez. It is claimed that, with the exception of Sydney, there is no eastern port which at low tide has a greater depth of water than that now provided in the Canal throughout the full length of nearly 105 miles. In any case the work in hand should meet the needs of any ship likely to be built for the eastern trade during the next few years.

When the Canal was opened in 1869, the width was 72 feet and the depth about 26 feet 2 inches. In June, 1913, the width at a depth of 32 feet 8 inches had been increased to a minimum of 147 feet 6 inches over a length of about 85 miles, and to a width of 328 feet over a distance of about 20 miles. The latest scheme makes provision for a depth of 40 feet throughout and for a widening up to 196 feet 8 inches in the south section, and the cutting of an appropriate number of sidings in the north and central sections, where a minimum width of 147 feet 6 inches is believed to be sufficient for the requirements of the immediate future.

The work of enlarging the capacity of the Canal presents no special difficulty on the engineering side. A good deal of sand is occasionally driven into the channel at Port Said during storms, but a remedy for this will be found in extension of the west breakwater by about 2,700 yards at a cost of over £6,000,000. The construction of this extension, which has been in hand for the past two years, is making satisfactory progress. The Suez Roads are being adequately dredged in accordance with an agreement between the Egyptian Government and the Company.

Almost up to the end of 1915 the works for extending the jetty to the west of Port Said, works of capital importance for the **protection of the entry** to the Canal, were pushed on uninterruptedly. In November, however, for want of hydraulic lime, the manufacture of artificial rocks for this jetty was interrupted. The submarine foundations in stone and rubble of the new jetty were, as a matter of fact, completed to a length of 2,500 metres; the protective blocks were laid for 1,040 metres, and cemented for over 800 metres. The protection of the Channel is thus secured, and there is no need for any apprehension as to its future.

For many years Indian time was in a state of chaotic confusion. What was called Madras or Railway time was kept on all the railways: and each great centre of population kept its own local time, which was not based on any common scientific principle and was divorced from the standards of all other countries. It was with a view to remedying this confusion that the Government of India took the matter up in 1904, and addressed to the Local Governments, and through them to all local bodies, a long letter which reviewed the situation and made suggestions for the future. The essential points in this letter are indicated below:

"In India we have already a standard time, which is very generally, though by no means universally, recognised. It is the Madras local time, which is kept on all railway and telegraph lines throughout India and which is 5h. 21m. 10s. in advance of Greenwich. Similarly, Rangoon local time is used upon the railways and telegraphs of Burma, and is 6h. 24m. 47s. ahead of Greenwich. But neither of these standards bears a simple and easily remembered relation to Greenwich time.

"The Government of India have several times been addressed by Scientific Societies, both in India and in England, and urged to fall into line with the rest of the civilised world. And now the Royal Society has once more returned to the attack. The Committee of that Society which advises the Government of India upon matters connected with its observatories, writes:—'The Committee think that a change from Madras time to that corresponding to a longitude exactly 5½ hours east of Greenwich would be an improvement upon the existing arrangements; but that for international scientific purposes the hourly zone system, making the time 5 hours in advance of Greenwich in the west, and 6 hours in advance in the east of India, would be preferable.

"Now if India were connected with Europe by a continuous series of civilised nations with their continuous railway systems all of which had adopted the European hour-zone system, it would be imperative upon India to conform and to adopt the second suggestion. But as she is not, and as she is as much isolated by uncivilised States as Cape Colony is by the ocean, it is open to her to follow the example of that and some other similarly situated colonies and to adopt the first suggestion.

"It is believed that this will be the better solution. There are obvious objections to drawing an arbitrary line right across the richest and most populous portions of India, and so as to bisect all the main lines of communication, and keeping times differing by an hour on opposite sides of that line. India has become accustomed to a uniform standard in the Madras time of the railways; and the substitution for it of a double standard would appear to be a retrograde step; while it would, in all probability, be strongly opposed by the railway authorities. Moreover, it is very desirable that whatever system is adopted should be followed by all Europeans and Indians alike; and it is certain that the double standard would puzzle the latter greatly; while by emphasising the fact that railway differed from local time, it might postpone or even altogether prevent the acceptance of the former instead of the latter by people generally over a large part of India. The one great advantage which the second possesses over the first alternative is, that under the former, the difference between local and standard time can never exceed half an hour: whereas under the latter it will even exceed an hour in the extreme cases of Karachi and Quetta. But this inconvenience is believed to be smaller than that of keeping two different times on the Indian system of railways and telegraphs.

"It is proposed, therefore to put on all the railway and telegraph clocks in India by 8m. 50s. They would then represent a time 5½ hours faster than that of Greenwich, which would be known as **Indian Standard Time**: and the difference between standard and local time at the places mentioned below would be approximately as follows, the figures representing minutes, and F. and S. meaning that the standard time is in advance of or behind local time respectively:—Dibrugarh 51 S., Shillong 38 S., Calcutta 24 S., Allahabad 2 F., Madras 9 F., Lahore 33 F., Bombay 39 F., Peshawar 44 F., Karachi 62 F., Quetta 62 F.

"This standard time would be as much as 54 and 55 minutes behind local time at Mandalay and Rangoon, respectively; and since the railway system of Burma is not connected with that of India, and already keeps a time of its own, namely, Rangoon local time, it is not suggested that Indian Standard Time should be adopted in Burma. It is proposed, however, that instead of using Rangoon Standard Time as at present, which is 6h. 24m. 47s. in advance of Greenwich, a Burma Standard Time should be adopted on all the Burmese railways and telegraphs, which would be one hour in advance of Indian Standard Time, or 6½ hours ahead of Greenwich time, and would correspond with 97° 30' E. longitude. The change would bring Burma time into simple relation both with European and with Indian time, and would (among other things) simplify telegraphic communication with other countries.

"Standard time will thus have been fixed for railways and telegraphs for the whole of the Indian Empire. Its general adoption for all purposes, while eminently advisable, is a matter which must be left to the local community in each case."

It is difficult to recall, without a sense of bewilderment, the reception of this proposal by various local bodies. To read now the fears that were entertained if Standard Time was adopted is a study in the possibilities of human error. The Government scheme left local bodies to decide whether or not they would adopt it. Calcutta decided to retain its own local time, and to-day Calcutta time is still twenty-four minutes in advance of Standard Time. In Bombay the first reception of the proposal was hostile; but on reconsideration the Chamber of Commerce decided in favour of it and so did the Municipality. Subsequently the opposing element in the Municipality brought in a side resolution, by which the Municipal clocks were put at Bombay time which is thirty-nine minutes behind Standard Time. On the 1st January 1906 all the railway and telegraph clocks in India were put at Indian Standard Time; in Burma the Burma Standard Time became universal. Calcutta retains its former Calcutta time; but in Bombay local time is retained only in the clocks which are maintained by the Municipality and in the establishments of some orthodox Hindus. Elsewhere Standard Time is universal.

Industries Commission.

A resolution issued by the Government of India in May, 1916, announced the appointment of a Commission to examine and report upon the possibilities of further industrial development in India and to submit its recommendations with special reference to the following questions:—(*a*) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated; (*b*) Whether and if so in what manner Government can usefully give direct encouragement to the industrial development: (1) By rendering technical advice more freely available; (2) by the demonstration of the practical possibility on a commercial scale of particular industries; (3) by affording directly or indirectly financial assistance to industrial enterprises, or (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

Subjects Excluded.—The original Resolution expressly directed that certain matters should be excluded from consideration. In framing the terms of reference, said the Resolution, it has been found necessary to exclude two matters from the scope of the Commission's labours. In the first place any consideration of the present fiscal policy of the Government of India has been excluded from its enquiries. In the next place it was not proposed that the Commission should re-examine those aspects of technical and industrial education which have recently been dealt with by a committee working in England and India, whose reports are at present under the consideration of the Government of India.

Personnel.—The Commission, as originally appointed, consisted of the following gentlemen: President, Sir T. H. Holland. Members:—Mr. Chatterton, Sir Fazulbhoy Currimbhoy Ebrahim, Mr. E. Hopkinson, Mr. C. E. Low, C.S., Pandit Madan Mohan Malaviya, Sir R. N. Mukerjee, the Rt. Hon. Sir Horace Plunkett, Mr. F H. Stewart and Sir D. J. Tata.

Sir Horace Plunkett was unable to serve on account of ill-health.

Mr. E. Hopkinson was compelled for the same reason to retire.

The commission met in October 1916 and proceeded on tour, but in February 1917, the appointment of Sir Thomas Holland to the presidency of the newly constituted Indian Munitions Board necessitated an interruption of the Commission's work for some months. The tour was resumed in November, 1917. Sir Thomas Holland presided over the opening session in Bombay, after which he left the Commission and returned to his duties on the Munitions Board. The presidency of the commission was assumed by Sir Rajendranath Mukerji.

The Report.

The Report of the Commission, which was issued in October 1918, is summarised:—

It is important to note that the constructive proposals depend on the acceptance of two principles:—(1) that in future Government must play an active part in the industrial development of the country, with the aim of making India more self-contained in respect of men and material, and (2) that it is impossible for Government to undertake that part, unless provided with adequate administrative equipment and forearmed with reliable scientific and technical advice.

With these principles in mind, it will be convenient first to glance at the administrative machinery which the Commission proposes and then to examine the work which it is intended to do. The administrative proposals include the creation of imperial and provincial departments of Industries and of an Imperial Industrial Service. The imperial department would be in charge of a member of the Viceroy's Executive Council, assisted by a board of three members entitled the Indian Industries Board and be responsible for the industrial policy of Government and the inauguration and carrying out of a uniform programme of industrial development throughout the country. The actual administrative work would be almost entirely decentralised and would devolve on Local Governments. The performance of these duties would necessitate the employment of a large staff of officers whose qualifications would primarily depend upon a knowledge of mechanical engineering; and the formation of an Imperial Industrial Service is suggested in order to safeguard Government against the dangers and difficulties of casual recruiting. This service would consist mainly of mechanical engineers and engineering technologists the majority of whom would be employed under the Local Governments. The headquarters of the Department and of the Board should be with the Government of India.

The provincial departments would be administered by Directors of Industries, assisted by specialists and technical advisers who would usually be seconded from imperial services for work under the Local Government. A provincial Director would thus be able to develop the industries of his province with the help of competent engineers and scientists. He would be advised by a provincial Board of Industries composed mainly of non-officials and he should hold the post of a secretary to Government to secure expeditious and effective despatch of work.

Future Possibilities.—It now remains to consider the work which this organisation is to carry out and the conditions of India which render essential a policy of active intervention on the part of Government in the industrial affairs of the country. The first chapters of the report deal with India as an Industrial country, her present position and her potentialities. They show how little the march of modern industry has affected the great bulk of the Indian population, which remains engrossed in agriculture, winning a bare subsistence from the soil by antiquated methods of cultivation. Such changes as have been wrought in rural areas are the effects of economic rather than of industrial evolution. In certain centres the progress of western industrial methods is discernible; and a number of these are described in order to present a picture of the conditions

under which industries are carried on, attention being drawn to the shortage and to the general inefficiency of Indian labour and to the lack of an indigenous supervising agency. Proposals are made for the better exploitation of the forests and fisheries. In discussing the industrial deficiencies of India, the report shows how unequal the development of our industrial system has been. Money has been invested in commerce rather than industries, and only those industries have been taken up which appeared to offer safe and easy profits. Previous to the war, too ready reliance was placed on imports from overseas, and this habit was fostered by the Government practice of purchasing stores in England. India produces nearly all the raw materials necessary for the requirements of a modern community; but is unable to manufacture many of the articles and materials essential alike in times of peace and war. For instance, her great textile industries are dependent upon supplies of imported machinery and would have to shut down if command of the seas were lost. It is vital, therefore, for Government to ensure the establishment in India of those industries whose absence exposes us to grave danger in event of war. The report advocates the introduction of modern methods of agriculture and in particular of labour-saving machinery. Greater efficiency in cultivation, and in preparing produce for the market would follow, labour now wastefully employed would be set free for industries, and the establishment of shops for the manufacture and repair of machinery would lead to the growth of a huge engineering industry. After examining the resources for generating power, the report says the coal of India is generally of a poor quality and the radius within which it can be economically used is accordingly limited. Moreover, the extension of metallurgical industries already started involves a severe attack on our visible supplies of cooking coal. The Commission recommends a special survey of the coal position in India. The oil fields of Burma are being rapidly drained and no others of equal value have been proved. Wind power is too intermittent for industrial use. Attention should be directed to more economical methods of using wood fuel, and new materials for industrial alcohol should be investigated. The harnessing of water power appears, however, to afford a more reliable source of energy, especially with a view to the development of thermo-electric industries; and Government is urgently enjoined to undertake a hydrographic survey in order to determine the places which offer possibilities for the establishment of hydro-electric installations.

The Indian in Industries.—The next chapters deal with "The Indian in Industries." They discuss measures designed to improve the efficiency of the Indian artisan and to encourage the educated Indian to take part in industrial enterprise. It is shown that the relative lowness of wages paid to Indian labour is counter-balanced by the comparative inefficiency of the individual Indian workman. The Commission assigns three causes for this inefficiency, viz., the absence of education, the prevailing low standard of comfort and the effects of preventible disease. The Commission expressed itself in favour of universal primary education, but considers that it would be unfair and unjust to impose upon employers this duty, which devolves rather upon the State and local authorities. But education of a technical kind is also required and the method of instruction to be followed will vary for workers in organised and for workers in cottage industries, the latter of whom, it may be remarked, considerably exceed the former in numbers. For cottage industries the Commission proposes an efficient system of education in industrial schools administered by head masters with practical knowledge of the industries taught, and controlled by the Departments of Industries. The extension of marketing facilities must go hand in hand with the teaching of improved processes. In the case of organised industries mechanical engineering is taken as a typical instance, and the proposals include the establishment of a system of organised apprenticeship for a period of four or five years, with practical training in the workshops and theoretical instruction in attached teaching institutions.

The Commission places better housing in the forefront of its recommendations to raise the standard of comfort of the Indian artisan. Subject to certain safeguards, Government should use its powers under the Land Acquisition Act to acquire sites for industrial dwellings, and land so acquired should be leased to employers on easy terms. Special remedies are proposed in the case of Bombay, where the problems of congestion are unique. General measures of welfare work among factory employees are also suggested and special attention should be paid to the improvement of public health. The elimination of such diseases as hookworm and malaria, which are prevalent almost everywhere in India, would add enormously to the productive capacity of the Indian labourer.

The general aversion from industrial pursuits of the educated Indian is ascribed to hereditary predisposition accentuated by an unpractical system of education. A complete revolution in the existing methods of training is proposed. For manipulative industries, such as mechanical engineering, an apprenticeship system, similar to that suggested for artisans should be adopted. The youth who aspires to become a foreman or an engineer, must learn to take off his coat at the start and should serve a term of apprenticeship in the workshops, supplemented by courses of theoretical instruction. At the conclusion of this period of training he may be allowed to specialise in particular subjects. For non-manipulative or operative industries, on the other hand, the teaching institution should be the main training ground, though practical experience is also necessary. Special proposals are made for commercial and mining education; and the future establishment of two imperial colleges is adumbrated, one for the highest grade of engineering and the other for metallurgy. To ensure the maintenance of close relations between the training institutions and the world of industry the general control of technical education should be transferred to the Department of Industries.

Government Intervention.—The remaining chapters of the report deal more specifically with Government intervention in

industries. Government clung long to the tradition of *laissez faire* in industrial matters; but when in recent years it attempted to play a more active part in industrial development, its efforts were rendered futile by the absence of scientific and technical advice to assist it in estimating the value of industrial propositions, and by the lack of any suitable agency to carry out approved proposals. To remedy the first of these defects, a reorganisation of the existing scientific services is advocated, in such a way as to unite in imperial services, classified according to science subjects, all the scattered workers now engaged in the provinces on isolated tasks. Rules are suggested to govern the relations between the members of these services and private industrialists seeking advice. The situation of research institutes and the conditions and terms of employment of these services are questions for the decision of which the Commission considers that the appointment of a special committee is necessary.

The administrative machinery with which Government must be equipped and some of the functions which that machinery will enable it to perform have already been described; but there are many other directions in which the development of industries can be stimulated. Useful and up-to-date information on commercial and industrial matters is essential both for Government and for private merchants and industrialists. A scheme is propounded for collecting such information and for making it available to the public through officers of the Department of Industries. The purchase of Government stores in the past has been conducted in such a way as to handicap Indian manufactures in competing for orders and to retard industrial development in India. The Commission proposes that the Department of Industries should be in charge of this work and that orders should not be placed with the Stores Department of the India Office until the manufacturing capabilities of India have first been exhausted. A chapter is concerned with the law of land acquisition and enunciates principles in accordance with which Government might compulsorily acquire sites for industrial undertakings; in another, the various methods by which Government might render direct technical aid to industries are explained. The Commission considers that ordinarily Government itself should undertake manufacturing operations only for the production of lethal munitions. The administration of the Boiler Acts, the Mining Rules and the Electricity Act, the employment of jail labour, the prevention of adulteration, patents, and the registration of business names, of trade marks and of partnerships, are matters which are specifically dealt with. In the opinion of the Commission the compulsory registration of partnerships is practicable and the question should be examined by Government with a view to legislation.

Small and Cottage Industries.—Industrial co-operation is discussed with reference to small and cottage industries; and the vexed question of railway rates on industries is considered. The Commission thinks that reduced rates to and from ports have been prejudicial to industrial development and that the position requires careful examination with a view to the removal of existing anomalies. In particular it should be possible to increase the rates on raw produce for export and on imports other than machinery and stores for industrial use. The addition of a commercial member to the Railway Board and the better representation of commercial and industrial interests at the Railway Conference would help to secure a more equable system of rating. The improvement of waterways and the formation of a Waterways Trust at Calcutta are also proposed.

The Commission lays emphasis on the disorganisation of Indian capital and its shyness in coming forward for industrial development. There is no lack of money in the country, yet the industrialist cannot obtain the use of it except on terms so exorbitant as to devour a large part of his profits. There is a crying necessity for the extension of banking facilities in the mofussil. The Commission is disposed to favour the establishment of an industrial bank or banks; but it considers that the appointment of an expert committee is necessary to deal with this subject and ask Government to take action at an early date. As an 'interim' measure, a scheme is propounded for the provisions of current finance to middle class industrialists, by which the banks would open cash credits in favour of applicants approved by the Department of Industries on the guarantee of Government. Various other methods of financial assistance by Government are suggested, in particular the provision of plant for small and cottage industries on the hire-purchase system.

Position summed up.—To sum up, the Commission finds that India is a country rich in raw materials and in industrial possibilities, but poor in manufacturing accomplishment. The deficiencies in her industrial system are such as to render her liable to foreign penetration in time of peace and to serious dangers in time of war. Her labour is inefficient, but for this reason capable of vast improvement. She relies almost entirely on foreign sources for foremen and supervisors; and her *intelligentsia* have yet to develop a right tradition of industrialism. Her stores of money lie inert and idle. The necessity of securing the economic safety of the country and the inability of the people to secure it without the co-operation and stimulation of Government impose, therefore, on Government a policy of energetic intervention in industrial affairs, and to discharge the multifarious activities which this policy demands, Government must be provided with a suitable industrial equipment in the form of imperial and provincial departments of Industries.

The recurring cost of the proposals is estimated at Rs. 86 lakhs; they involve a capital expenditure of Rs. 150 lakhs, mainly on educational institutions, and a further capital outlay of Rs. 66 lakhs is anticipated for future developments. The Commission considers that this expenditure may be worked up to at the end of a period of 7 years

Pandit Malaviya appended a minute of dissent objecting to the appointment of an Industrial Service and recommending the enlistment of the necessary staff for a term of years.

DEPARTMENT OF INDUSTRIES.

By a resolution of the Government of India, Department of Commerce and Industry, dated February 26, 1920, a Board of Industries and Munitions was constituted as a temporary organization designed to close the war commitments of the Indian Munitions Board, to take over from the Commerce and Industry Department and the Public Works Department certain items of work, and to undertake the initial work of industrial organisation, and in particular to frame detailed proposals for a new Department of Industries.

Proposals formulated by the Board of Industries and Munitions for the creation of a Department of the Government of India to deal with industrial questions have now received the approval of Secretary of the State for India, and accordingly a permanent Department of Industries was created in 1921. The new Department will deal for the present with the heads of business detailed in the resolution. It will be under the charge of the Hon. Sir Thomas Holland, Member of the Governor-General's Executive Council.

Concurrently with the creation of the permanent Department of Industries, the Board of Industries and Munitions ceased to exist. The work connected with the closing of the war commitments of the late Indian Munitions Board and the disposal of surplus stores on behalf of His Majesty's Government has been entrusted to a separate temporary organisation under an officer designated Chief Controller (Surplus Stores) responsible to the Member-in-Charge of Industries.

On the retirement of Sir George Barnes in April 1921 Sir Thomas Holland became Member in charge of the portfolios of Industries and Commerce. This post he resigned later in the year on account of a difference of opinion with the Viceroy on the subject of what is called The Calcutta Munitions Case — a case where several individuals were under trial for fraud in connection with munitions contracts during the war. The case raised no little commotion at the time, not the least of the causes of this being the statement of the Advocate-General for the Crown that the Government knew the accused were guilty and could prove that they were guilty, but did not propose to proceed with the case. With the retirement of Sir Thomas Holland the activities connected with the Department, other than routine matters were suspended, as no successor had been appointed up to the close of the year and Mr C. A. Innes, the Secretary of the Department, acted as Member. But although there has not been any official pronouncement on the subject it is unlikely that the grandiose scheme prepared by the Industries Commission will come to fruition. There is not the money available, for the Government of India are faced by serious and continuing deficits, and there are grave doubts whether these recommendations can fit in with the new constitution, which remits Industrial to the Provinces for administration.

Indian Orders.

The Star of India.

The Order of the Star of India was instituted by Queen Victoria in 1861, and enlarged in 1866, 1876, 1897, 1902, and 1911, and the dignity of Knight Grand Commander may be conferred on Princes or Chiefs of India, or upon British subjects for important and loyal service rendered to the Indian Empire; the second and third classes for services in the Indian Empire of not less than thirty years in the department of the Secretary of State for India. It consists of the Sovereign, a Grand Master (the Viceroy of India), the first class of forty-four Knights Grand Commanders (22 British and 22 Indian), the second class of one hundred Knights Commanders, and the third class of two hundred Companions, exclusive of Extra and Honorary Members, as well as certain additional Knights and Companions.

The Insignia are (i) the Collar of gold, composed of the lotus of India, of palm branches tied together in satire, of the united red and white rose, and in the centre an Imperial Crown; all enamelled in their proper colours and linked together by gold chains. (ii) The Star of a Knight Grand Commander is composed of rays of gold issuing from a centre, having thereon a star of five points in diamonds resting upon a light blue enamelled circular riband, tied at the ends and inscribed with the motto of the Order, *Heaven's Light our Guide*, also in diamonds. That of a Knight Commander is somewhat different, and is described below. (iii) The Badge, an onyx cameo having Her Majesty Queen Victoria's Royal Effigy thereon, set in a perforated and ornamental oval, containing the motto of the Order surmounted by a star of five points, all in diamonds. (iv) The Mantle of light blue satin lined with white, and fastened with a cordon of white silk with blue and silver tassels. On the left side a representation of the Star of the Order.

The ribbon of the Order (four inches wide for Knights Grand Commanders) is sky-blue, having a narrow white stripe towards either edge, and is worn from the right shoulder to the left side. A Knight Commander wears (a) around his neck a ribbon two inches in width, of the same colours and pattern as a Knight Grand Commander, and pendent therefrom a badge of a smaller size, (b) on his left breast a Star composed of rays of silver issuing from a gold centre, having thereon a silver star of five points resting upon a light blue enamelled circular ribbon, tied at the ends, inscribed with the motto of the Order in diamonds. A Companion wears from his left breast a badge of the same form as appointed for a Knight Commander, but of a smaller size pendent to a like ribbon of the breadth of one and a half inches. All Insignia are returnable at death to the Central Chancery, or if the recipient was resident in India, to the Secretary of the Order at Calcutta.

Sovereign of the Order:—H. I. M. The King.

Grand Master of the Order:—His Excellency the Viceroy and Governor-General of India, the Right Honourable Lord Reading.

Honorary Knights Grand Commanders (G. C. S. I.)

Prince Louis Alberic D'Arenberg
Hon. General His Majesty Chowfa Maha Vajiravudh, King of Siam.

Extra Knights Grand Commanders (G. C. S. I.)

H. M. the Queen Empress
H. R. H. The Duke of Connaught

Knights Grand Commanders (G. C. S. I.)

H. H. the Gackwar of Baroda
H. H. the Maharana of Udaipur
H. H. the Maharajah of Jaipur
H. H. the Maharaja of Travancore
The Marquis of Lansdowne
H. H. the Maharaja of Jammu and Kashmir
H. H. the Maharaja of Kohlapur
H. H. the Maharaja of Gwalior
Lord Harris
H. H. the Maharaja of Jodhpur
Baron Macdonnell
Earl Curzon of Keddleston
Lord George Hamilton
H. H. the Raja of Cochin
Baron Ampthill
MaharajaSir Chandra Shumshere Jung Bahadur, Rana of Nepal.
H. H. the Maharaja of Orchha
H. H. the Maharaja of Mysore
Baron Hardinge of Penshurst
H. H. the Begum of Bhopal
Sir Steuart Bayley
Sir Dighton Probyn
Baron Sydenham
Sir Arthur Lawley
Sir John Hewett
H. H. the Maharaja of Bikaner
H. H. Maharao of Kotah
General Sir O'Moore Creagh
General Sir Edmund George Barrow
H. H. the Maharaja of Kapurthala
His Exalted Highness the Nizam of Hyderabad
H. H. the Aga Khan
H. H. the Nawab of Tonk.
H. H. the Maharao of Cutch.
Baron Carmichael of Skirling
Baron Pentland.
Baron Willingdon.
H. E. Sir Charles Monro.
H. H. Maharao Raja of Bundi.
H. H. The Maharaja of Benares.
H. H. The Maharaja of Patiala.
Sir Arthur Arnold Barrett.
H. H. The Nawab of Rampur.

Knights Commanders (K. C. S. I.)

Sir Joseph West Ridgeway
Sir David Miller Barbour
Sir Phillip Perceval Hutchins
Sir Henry Edward Stokes
Sir Henry Mortimer Durand
Sir Frederick William Richards Fryer
H. H. Maharao of Sirohi
Sir Courtenay Peregrine Ilbert
Sir William Mackworth Young

Sir William John Cunningham
Sir Richard Udny
Colonel Sir Howard Melliss
Sir John Frederick Price
Sir Charles Montgomery Rivaz
Sir James Digges La Touche
Sir Henry Martin Winterbotham
Sir James Montcath
Lieut.-Col. Sir Donald Robertson
Sir Hugh Shakespear Barnes
Sir William Roe Hooper
Sir Arundel Tagg Arundel
Sir Arthur Henry Temple Martindale
Sir James Thomson
Sir Joseph Bampfylde Fuller
H. H. Raja of Chamba
Lieut.-Col. Arthur John, Baron Stamfordham
Sir Thomas William Holderness
Sir Lancelot Hare
Sir Charles Stuart Bayley
H. H. Raj Rana of Jhalawar
Raja Sir Tasadduk Rasul Khan of Jehangirabad, Oudh
Sir James Wilson
H. H. Maharaja of Alwar
H. H. Raja of Jind
Sir Henry Erle Richards
Sir Gabriel Stokes
Sir George Stuart Forbes
H. H. Raja of Ratlam
Sir James Lyle, Baron Inchcape
Sir Harvey Adamson
Nawab of Murshidabad
Lieut.-Col. Sir James Robert Dunlop-Smith
Sir John Ontario Miller
Sir Lionel Montague Jacob
Sir Murray Hammick
Sir Krishna Govinda Gupta
Sir Leslie Alexander Selim Porter
Sir Spencer Harcourt Butler
Sir Robert Warrand Carlyle
H. H. Maharaja of Kishangarh
Sir Reginald Henry Craddock
Sir James McCrone Douie
Lord Meston of Agra and Dunottar.
Sir Benjamin Robertson
Sir Richard Amphlett Lamb
Maharajadhiraj of Burdwan
Sir Elliot Graham Colvin
Sir Trevredyn Rashleigh Wynne
Sir George Casson Walker
H. H. Maharaja of Dhar
H. H. Maharaja of Dewas State (Senior Branch)
Surg.-Gen. Sir Francis Wollaston Trevor
H. H. Maharaja of Bhutan
Sir John Nathaniel Atkinson
Sir William Thomson Morison
Sir George Head Barclay
General Sir James Willcocks
Lieut.-Col. Sir G. Roos-Keppel
Sir M. F. O'Dwyer
Sir Salyid Ali Imam
Sir Michael William Fenton
Sir Harold Arthur Stuart
Colonel Sir Sidney Gerald Burrard
Sir William Henry Solomon
Genl. Sir W. R. Birdwood.
Sir Sundaram Aiyar Sivaswami Aiyar
Sir Frederick William Duke
Sir Edward Albert Gait
H. H. Nawab of Maler Kotla
H. H. Maharaja of Sirmur
Sir William Henry Clark
Sir William Stevenson Meyer
Major-General Sir Percy Zachariah Cox
Sir Steyning William Edgerley
Sir Harrington Verney Lovett
Sir Robert Woodburn Gillan
Maharaj Sri Sir Bhairon Singh Bahadur
Sir Alexander Gordon Cardew
Lieut.-Col. Sir Hugh Daly
Sir C. H. A. Hill
H. H. Maharaja Malhar Rao Baba Saheb Puar. Dewas (Junior Branch)
H. H. Maharaja Bahadur of Cooch-Behar
H. H. Maharaja Jam Saheb of Navanagar
H. H. The Maharaja of Dhrangadhra
Lieut.-Col. Sir F. E. Younghusband
Sir T. Morison
Major-Gen. G. M. Kirkpatrick
Major Gen. R. C. O. Stuart
Sir George Rivers Lowndes
H. H. Maharajadhiraja Maharawal Sir Jowahir Singh Bahadur of Jaisalmer
Sir Archdale Earle
Sir Stuart Mitford Fraser
Sir John Strathedan Campbell
Sir Frank George Sly
H. H. the Maharaja of Datia
H. H. the Maharaj Rana of Dholpur
Sir William Vincent
Sir Thomas Holland
Lieut. General Sir William Raine Marshall.
Sir James Bennett Brunyate
Sir Sydney Arthur Taylor Rowlatt
Sir Oswald Vivian Bosanquet
Sir G. Carmichael
Dr. Sir M. E. Sadler
The Right Hon'ble Lord Southborough
Lieut.-Colonel Maharaja Daolat Singhji of Idar
The Hon'ble Diwan Bahadur Sir P. Rajagopala Achariyar
Sir R. Nathan
Lieut-Gen. Sir Alexander Stanhope Cobbe.
Major-Gen. Sir Harry Triscott Brooking.
Lieut-Gen. Sir George Fletcher MacMunn.
Sir George Barnes.
Colonel Nawab Muhammad Nasrulla Khan of Bhopal.
Sir Edward Maclagan
Lord Sinha of Raipur
Sir N. D. Beatson-Bell
Sir William Marris
Sir L. J. Kershaw
Sir G. S. Curtis
Sir L. Davidson
C. G. Todhunter.
Sir Henry Wheeler.
Captain His Highness Maharawal Shri Ranjitsinghji Mansinghji, Raja of Baria, Bombay.
The Hon'ble Mian Muhammad Shafi.
The Hon'ble Mr. Hailey.
The Hon'ble Sir Hamilton Grant of the North-West Frontier Provinces.

Companions (C. S. I.)

Major-Gen. Beresford Lovett
Col. Leopold John Herbert Grey
Sir Henry William Primrose
Lieut.-Gen. Michael Weekes Willoughby
Raja Piari Mohan Mukharji of Uttarpara
Sir Frederick Russell Hogg
Col. Charles Edward Yate
William Rudolph Henry Merk
Chhatrapati, Jagirdar of Alipura

James Richard Naylor
Sardar Jiwan Singh
Col. George Herbert Trevor
Lieut.-Col. Henry St. Patrick Maxwell
Sir Jervoise Athelstane Baines
Sir Thomas Salter Pyne
Alan Cadell
Sir Arthur Upton Fanshawe
James Fairbairn Finlay
Joseph Parker
Horace Frederick D'Oyly Moule
Col. Thomas Gracey
Sir Henry Babington Smith
Henry Aiken Anderson
Lieut.-Col. Sir Arthur Henry McMahon
Sir Henry Evan Murchison James
Charles William Odling
Alexander Walmesley Cruickshank
David Norton
Thomas Stoker
Sir Edward Richard Henry
Lucas White King
Sir Mackenzie Dalzell Chalmers
Henry Farrington Evans
Richard Gillies Hardy
Herbert Charles Fanshawe
Sir Frederick Styles Philpin Lely
George Robert Irwin
Lieut.-Gen. Sir George Lloyd Reilly Richardson
Robert Burton Buckley
Arthur Frederick Cox
Charles Gerwien Bayne
Hartley Kennedy
Sir Edwin Grant-Burls
Major-Gen. Trevor Bruce Tyler
William Charles Macpherson
Lt.-Col. James Alexander Lawrence Montgomery
Lt.-Gen. Henry Doveton Hutchinson
Raja of Burdwan
Nawab of Pahasu
Raja Badan Singh
Col. James White Thurburn
Alfred Brereton
William Thomas Hall
Richard Townsend Greer
Sir Louis William Dane
Sir Alfred Macdonald Bulteel Irwin
Col. James Bird Hutchinson
Raja Ram Pal
Hermann Michael Kisch
Sir Cecil Michael Wilford Brett
Herbert Bradley
Sir Frank Campbell Gates
John Mitchell Holms
Percy Seymour Vessey Fitzgerald
Lt.-Col. Willoughby Pitcairn Kennedy
Raja Narendra Chand
Arthur Delaval Younghusband
Oscar Theodore Barrow
Col. Howard Goad
Francis Alexander Slacke
Saiyid Husain Bilgrami
Percy Comyn Lyon
Algernon Robert Sutherland
Sir George Watson Shaw
William Arbuthnot Inglis
Romer Edward Younghusband
Major-General Herbert Mullaly
John Alexander Broun
Col. Henry Finnis
Maj.-Gen. Sir Alfred William Lambert Bayly
Maurice Walter Fox-Strangways
William Lochiel Sapte Lovett Cameron
Raja Madho Lal of Benares
Sir Ashutosh Mukharji
Maj.-Gen. Sir Henry Montague Pakingt Hawkes
Francis Capel Harrison
Comdr. Sir Hamilton Pym Freer-Smith
Andrew Edmond Castlestuart Stuart
Norman Goodford Cholmeley
Walter Francis Rice
Havilland Le Mesurier
Cecil Edward Francis Bunbury
Major-General Reginald Henry Mahon
Rear-Admiral Allen Thomas Hunt
Henry Walter Badock
James Mollison
Sir Pirajirao Bapu Sahib Ghatge
John Walter Hose
Charles Ernest Vear Goument
Herbert Lovely Eales
Frederick Beadon Bryant
George Moss Harriott
Ernest Herbert Cooper Walsh
Sir Edward Vere Levinge
Lieut.-Col. Charles Archer
James Peter Orr
Herbert Alexander Casson
William Axel Hertz
Sir Mahadev Bhaskar Chaubal
Brevet-Lieut.-Colonel Clive Wigram
Herbert Thompson
Surgeon-General William Burney Bannerman
Licut.-Col. Sir John Ramsay
Stuart Lockwood Maddox
Gilbert Thomas Walker
Lieut.-Col. Phillip Richard Thornhagh Gurdon
Khan Zulfikar Ali Khan
Surgeon-General George Francis Angelo Harris
Edmund Vivian Gabriel
John Stuart Donald
Henry Montague Segundo Mathews
Arthur Crommelin Hankin
Faridoonji Jamshedji
Maulvi Ahmad Hussain
Horace Charles Mules
H. H. Raja Sir Bije Chand, Raja of Bilaspur
Lieut.-Col. Arthur Russell Aldridge
Lieut.-Col. Mathew Richard Henry Wilson
John Charles Burnham
Col. Thomas Francis Bruce Renny-Tallyour.
Michael Kennedy
Thakor Karansinghji Vajirajji of Lakhtar
Col. Alain Chartier de Lotbiniere Joly de Lotbiniere
Lieut.-General Sir Herbert Vaughan Cox
Col. Robert Smeiton Maclagan
Lieut.-Col. Charles Mowbray Dallas
Edward Henry Scamander Clarke
Sir Jagadish Chandra Bose
Mirza Sir Abbas Ali Baig
Oswald Campbell Lees
Paul Gregory Melitus
Lieut.-Col. Albert Edward Woods
William Exall Tempest Bennett
Hon. Maj. Nawabzada Obaidullah Khan
William Ogilvie Horne
William Harrison Moreland, C.I.E.
Diwan Bahadur Chaube Raghunath Das.
Col. Lestock Hamilton Reid
Surg.-Gen. Henry Wickham Stevenson
Hon. Lieut.-Col. Raja of Lambagraon
Lieut.-Col. Donald John Campbell MacNabb
Lieut.-Col. Henry Walter George Cole
Henry Venn Cobb

Major-General Gerald Godfrey Giffard
Frederick William Johnston
William Henry Lucas
The Thakor Saheb of Sayla
Arthur Leslie Saunders
Sir Henry Wheeler
Sardar Sir Daljit Singh of Jullunder
Lieut.-Col. Raj Kumar Bir Bikram Singh
Walter Maude
Henry Ashbrooke Crump
William James Reid
Mysore Kantharaj Urs
Walter Gunnell Wood
John Cornwallis Godley
A. Butterworth
S. M. Edwardes
Lt.-Col F. H. Elliott
Sir Herbert John Maynard.
Lt.-Col A. B. Dew
Major W. M. Hailey
H. T. Keeling
Sir A. H. Grant
H. Sharp.
L. C. Porter
R. R. Scott
Col. Sir J. W. E. Douglas-Scott Montagu
Rear-Admiral Arthur Hayes-Sadler
Laurence Robertson
John Ghest Cumming
Lieut.-Col. Stephen Lushington Aplin
Sir James Houssemayne DuBoulay
Sir John Barry Wood
Major-General Sir Arthur Wigram Money
Col. L. A. C. Gordon
T. A. Chalmers
Sir Henry Robert Conway Dobbs.
R. Burn
J. H. Kerr
G. B. H. Fell
Major-General Sir W. C. Knight
Lt.-Col. C. Kaye
Patrick James Fagan
Col. Hormasji Edulji Banatwalla, I.M.S
Lt.-Col. Lawrence Impey
Col. Benjamin William Marlow
Lt.-Col. Harold Fenton Jacob
Lt.-Col. Francis Beville Prideaux
Lt.-Col. Stuart George Knox
Col. Hugh Whitchurch Perry
Henry Cecil Ferard
Charles Evelyn Arbuthnot William Oldham
Evan Maconochie
Francis Coope French
Major-General C. W. G. Richardson
Lt.-Col. A. P. Trevor
Horatio Norman Bolton
H. S. Laurence
L. E. Buckley
C. H. Bompas
M. M. S. Gubbay
Maj.-Gen. R. Wapshare
Brig-Gen. J. M. Walter
Major-General J. C. Rimington
Colonel H. R. Hopwood
Brig.-General R. H. W. Hughes
Brig.-General W. G. Hamilton
Lieut.-Col. A. W. N. Taylor
Major A. J. Anderson
Brig.-General Theodore Fraser
Brig.-General W. N. Campbell
Col. Thomas A. Harrison
Major-General L. C. Dunsterville
Hugh McPherson
Henry Fraser Howard
Henry Hubert Hayden
Lieut.-Col. Herbert Des Voeux
Col. Charles Rattray
Temp. Lieut.-Col. Evelyn Berkeley Howell
Lieut.-Col. and Brevet-Col. Felix Fordati Ready
Col. Herbert Evan Charles Bayley Nepean
Lieut.-Col. Patrick Robert Cadell
Lieut.-Col. Montagu William Douglas
Colonel Charles Mactaggart
John Perronet Thompson
Richard Meredith
Hugh Lansdown Stephenson
Manubhai Nandshankar Mehta
Lieut.-Col. Thomas Wolseley Haig
Herman Cameron Norman
Reginald Arthur Mant
Colonel Alexander John Henry Swiney
Brevet-Col. James Wilton O'Dowda
Colonel Frederic George Lucas
Brevet-Lieut.-Col. Arnold Talbot Wilson
Lieut.-Col. and Brevet-Col. Charles Ernest Graham Norton
Captain Wiltrid Nunn
Brevet-Colonel (temporary Brigadier-General) Hubert Isacke
Brevet-Colonel (temporary Brigadier-General) Stewart Gordon Loch
Colonel (temporary Brigadier-Gen.) William Kelty McLeod
Col. Frederick James Moberly
Colonel (temporary Brigadier-Gen.) Robert Fox Sorsbie
Colonel Alan Edmondson Tate
Major-Gen. William Cross Barratt
Temporary Brigadier-General Sir Edward Hugh Bray
Col. (temporary Brigadier-Gen.)Arthur Howarth Pryce Harrison
Colonel (temporary Major-Gen.) Frank Ernest Johnson
Colonel (temporary Major-Gen.) Sidney Mercer Rerny
Major-General Robert Archibald Cassels
Charles George Todhunter
Alexander Phillips Muddiman
Frederick Campbell Rose
Selwyn Howe Fremantle
Peter William Monie
Major-General Charles Astley Fowler
Major-General Harold Handley
Colonel Michael Edward Willoughby
Colonel Edward Arthur Fagan
Colonel Herbert William Jackson
Lt.-Col. Arthur Leslie Jacob
William Pell Barton
C. F. Payne
J. L. Rieu
W. J. J. Howley
B. P. Standen
J. L. Maffey
Lieut.-Col. J. L. W. F. French-Mullen
Nawabzada Haji Muhammad Hamidulla Khan of Bhopa
George Rainy
The Raja of Muhammadabad, United Provinces
R. E. Holland
Lieutenant-Colonel F. G. Beville
C. A. Innes
C. J. Hallifax
Colonel (temporary Major-General) H. F. Cooks
E. M. Proes

L. T. Harris
A. R. Banerji
R. I. R. Glancy
W. R. Gourlay
Colonel K. Wigram, I. A.
Rai Bahadur Dewan Bishan Das
C. A. Barron
H. M. R. Hopkins
R. A. Graham
P. J Mead
G. R. Clarke
D. Donald
Khan Bahadur Sardar Mohmed Ali Khan Kazilbash of Lahore

Captain Raja Narendra Sah, of Tehri (Garhwal)
The Hon'ble Mr Knapp, I C S , Madras
Mr. Marjoribanks
The Hon'ble Mr. Bray of the Foreign Dept.
Mr. Arbuthnot of Burma

Mr King of the Punjab
Pandit Hari Kishan Kaul of the Punjab
Pandit Kishan Kaul of Jullunder, Punjab
Mr. Hignell, Private Secretary to the Viceroy

Mr Crerar of Bombay
Colonel Muspratt
Mr Copleston of the Forests, Bombay
Mr Evans of Madras

OFFICERS OF THE ORDER.

Secretary, Sir John Wood
Registrar, Col. Sir Douglas F. R. Dawson

The Most Eminent Order of the Indian Empire.

This Order, instituted by H. M. Queen Victoria, Empress of India, Jan. 1st, 1878, and extended and enlarged in 1886, 1887, 1892, 1897, and 1902 is conferred for services rendered to the Indian Empire, and consists of the Sovereign, a Grand Master, thirty-two Knights Grand Commanders (of whom the Grand Master is first and principal), ninety-two Knights Commanders, and an indefinite number of Companions (not exceeding, without special statute, 20 nominations in any one year); also Extra and Honorary Members over and above the vacancies caused by promotion to a higher class of the Order, as well as certain Additional Knights and Companions appointed by special statute Jan. 1st, 1909, commemorative of the 50th Anniversary of the assumption of Crown Govt. in India.

The Insignia are: (*i*) The COLLAR of gold formed of elephants, lotus flowers, peacocks in their pride, and Indian roses, in the centre the Imperial Crown, the whole linked together with chains; (*ii*) The STAR of the Knight Grand Commander, comprised of five rays of silver, having a small ray of gold between each of them, the whole alternately plain and scaled, issuing from a gold centre, having thereon Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatricis Auspiciis*, and surmounted by an Imperial Crown gold; (*iii*) The BADGE, consisting of a rose, enamelled gules, barbed vert, and having in the centre Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatricis Auspiciis*, surmounted by an Imperial Crown, also gold; (*iv*) The MANTLE is of Imperial purple satin, lined with and fastened by a cordon of white silk, with purple silk and gold tassels attached. On the left side a representation of the Star of the Order.

A Knight Commander wears: (*a*) around his neck a ribbon two inches in width, of the same colour (purple) and pattern as a Knight Grand Commander, pendent therefrom a badge of smaller size: (*b*) on his left breast a star, similar to that of the first class, but the rays of which are all of silver.

The above mentioned Insignia are returned at death to the Central Chancery, or if the Knight was resident in India to the Secretary of the Order at Calcutta.

A Companion wears from the left breast a badge (not returnable at death) of the same form as appointed for a Knight Commander, but of smaller size, pendent to a like ribbon of the breadth of one and a half inches.

Sovereign of the Order:—The King, Emperor of India.

Grand Master of the Order:—Lord Reading.

Honorary Knights Grand Commanders (G. C. I. E.)

The *ex*-Emperor of Korea.
Shaikh Sir Khazal Khan, Shaikh of Mohammerah and Dependencies.
Amir Sir Abdul Aziz bin Abdur Rahman, Ruler of Najd and Hassa and Kalif.

Extra Knight Grand Commander (G. C. I. E.)

The Duke of Connaught

Knights Grand Commanders (G.C.I.E.)

Lord Reay
The Maharao of Cutch
Lord Lansdowne
Lord Harris
The Nawab of Tonk
The Wali of Kalat
Lord Sandhurst
Maharaja of Karauli
Thakur Sahib of Gondal
Thakur Sahib of Morvi
Sir George Faudel-Phillips
The Maharaja of Benares
Lord Curzon of Keddleston
The Maharaja of Jaipur
The Maharaja of Orchha
Lord Ampthill
Maharao of Bundi
The Maharao of Sirohi
The Aga Khan
The Maharaja of Travancore
Lord Lamington
The Begam of Bhopal
Sir Edmond Elles
The Nawab of Janjira
Sir Walter Laurence
Sir Arthur Lawley
The Maharaja of Bikaner
The Maharao of Kotah
Lord Sydenham
The Nawab of Rampur
Maharaj Sir Kishan Parshad

Lord Hardinge
Lord Carmichael
Maharaja of Kashmir
Sir Louis Dane
Maharaja of Bobbili
Lord Stamfordham
Sir Guy Fleetwood Wilson
Sir John Jordan
The Maharana of Udaipur
The Maharaja of Patiala
The Mir of Khairpur
The Raja of Cochin
Lord Pentland
The Raja of Pudukottai
Lord Willingdon
Maharaja of Kolhapur
The Yuvaraja of Mysore
Sir Charles Stuart Bayley
Maharaja of Darbhanga
H. H. the Maharaja of Jind
The Earl of Ronaldshay
Sir Michael Francis O'Dwyer
Major-Gen. Sir George Olaf Ross-Keppel
Sir Gulam Muhammad Ali, Prince of Arcot
Major-Gen. Sir Percy Zachariah Cox
H. H. the Maharaja of Indore
The Raja of Cochin
Sir William Duke
Sir W. S. Meyer
Lieut. (Temp. Captain) Sir G. A. Lloyd
The Maharaja of Baroda
The Maharaja of Alwar
The Maharaja of Kapurthala.
H. H. Sir Ugyen Wangchuk, Maharaja of Bhutan

Honorary Knights Commanders (K. C. I. E.)

Sir Leon E. Clement-Thomas
Dr. Sir Sven Von Hedin
The Sultan of Shehr and Mokalla
Cavaliere Filippo De'Filippi
General Sir Baber Shumshere Jung Bahadur Rana of Nepal
H. E. the Amir of Najd and Hassa and Katif
General Sir Judha Shumshere Jung Bahadur, Rana of Nepal
Sultan Sir Abdul Karim Fadthli bin Ali of Labej
Sir Alfred Martineau
Commanding General Sir Padma Shum Shere Jung Bahadur, Rana of Nepal.
Genl. Sir Tex Shum Shere Jung Bahadur, Rana of Nepal.
H. E. The Shaikh of Bahrain and Dependencies
Sir Yang-tseng-hsin, Chiang Chun and Governor of Hsin Kiang Province.
Sir Mirza Ali Muhammad Khan Mowaqqar-ed-Dowleh, late Governor of Gulf Ports
H. E. Sir Mirza Ahmad Khan Daiya Bagi, present Governor of Gulf Ports

Knights Commanders (K. C. I. E.)

Surg.-Gen. Sir Benjamin Simpson
Sir Albert James Leppoc Cappel
Sir Alfred Woodley Croft
Sir Bradford Leslie
Sir Arthur Baron Carnock
Sir Guildford Molesworth
Sir Frederick Russell Hogg
Sir Henry Mortimer Durand
Sir Arthur George Macpherson
Raja of Lunawara
Sir Henry Hoyle Howorth
Sir Edward Charles Kayll Ollivant
Sir Henry Seymour King
Baron Inchcape
Col. Sir Henry Revenshaw Thuillier
Sir Wm. R. Brooke
Maharaja of Gidhaur
Nawab of Loharu.
Rear-Admiral Sir John Hext
Sir Mancherjee Bhownaggree
Col. Sir Thomas Holdich
Sir Andrew Wingate
Raja Sir Harnam Singh, Ahluwalia
Sir S. Subramaniya Aiyar
Sir Alexander Cunningham
Sir Henry Evan Murchison James
Sir James George Scott
Sir Lawrence Hugh Jenkins
Sir Herbert Thirkell White
Sir Frederick Augustus Nicholson
Sir Arthur Upton Fanshawe
Raja Dhiraj of Shahpura
Sir Gangadhar Rao Ganesh, Chief of Mira (Senior Branch)
Brevet-Col. Sir Buchanan Scott
Col. Sir John Walter Ottley
Lieut.-Col. Sir Francis Edward Younghusband
Major-General Sir James R. L. Macdonald
Sir Fredric Styles Philpin Lely
Lt.-Col. Sir Arthur Henry McMahon
Gen. Sir Donald James Sim McLeod
Maharaja of Balrampur
Sir Francis Whitmore Smith
Nawab of Pahasu
Sir Arthur Naylor Wollaston
Sir Thomas Henry Holland
Nawab Sir Muhammad Ali Beg
H. H. Maharajadhiraja of Kishangarh
Raja of Mahmudabad
Sir Trevredyn Rashleigh Wynne
Sir Richard Morris Dane
Maharajadhiraja of Burdwan
Sir Wilhelm Schlich
Sir Theodore Morison
Gen. Sir Robert Irvin Scallon
Sir John David Rees
Rear-Admiral Sir Edmond John Warre Slade
Sir John Benton
Sir Archdale Earle
Sir Charles Stewart-Wilson
Lieut.-Gen. Sir Malcolm Henry Stanley Grover
Sir Charles Rait Cleveland
Field Marshal Sir Douglas Haig
Lieut.-Col. Sir Hugh Daly
Sir Henry Parsall Burt
Sir James Houssemayne DuBoulay
Sir Rajendra Nath Mukharji
Lieut.-Col. Sir Henry Beaufoy Thornhill
Sir Gangadhar Madho Chitnavis
H. H. Nawab of Jaora State
H. H. Raja of Sitamau State
Raj Sahib Sir Amarsinhji Banesinhji (Vankaner)
Sir Ramkrishna Gopal Bhandarkar
Sir Michael Filose
Rear-Adm. Sir Colin Richard Keppel
Sir John Stanley
Sir Saint-Hill Eardley-Wilmot
Sir Francis Edward Spring
H. H. Maharawat of Partabgarh
H. H. Maharaja of Bijawar State, Bundelkhand

Sir John Twigg
Sir George Abraham Grierson
Sir Marc Aurel Stein
Nawab Sir Bahram Khan
Sir Henry Alexander Kirk
Sir Alfred Gibbs Bourne
Chief of Jamkhandi
Sir Frank Campbell Gates
Sir George Macartney
Sir Edward Douglas Maclagan
Maj.-Gen. Sir George John Younghusband
Sir Brian Egerton
Sir Stephen George Sale
Sir Prabhashankar D. Pattani
Maharaja of Kasimbazaar
Lieut.-Col. Sir John Ramsay
Sir William Maxwell
Sir Faridoonji Jamshedji, C.S.I.
Sir Mokshagundam Visvesvaraya
His Highness the Maharaja of Samthar
Sir John Stuart Donald
Lieut.-Col. Sir Percy Molesworth Sykes
Sir Edward Vere Levinge
Nawab Sir Syed Shams-ul-Huda
Raja Sir Rampal Singh
Sir Alexander Henderson Diack
Sir Sao Mawng
H. H. Raja Sir Arjun Singh of Narsingarn
Captain Malik Sir Umar Hayat Khan
Sir Robert Bailey Clegg
Sir Henry Wheeler
Sir Mahadeo B. Chaubal
Sir James Walker
Mirza Sir Abbas Ali Baig
H. H. the Raja of Bilaspur
Nawab Sir Sahibzada Abdul Qaiyum
Lieut.-Gen. Sir Raleigh Gilbert Egerton
Lieut.-Gen. Sir Henry D'Urban Keary
Sir George Cunningham Buchanan
Major-Gen. Sir William George Lawrence Beynon
Raja of Rajgarh
Rana of Barwani
Raja of Sonpur
Capt. Raja Sir Hari Singh
Sir John Barry Wood
Sir Alfred Hamilton Grant
Colonel Sir Vere Bonamy Fane
Thakur Saheb of Rajkot
Lieut.-Col. W. J. Buchanan
Lieut.-Col. Raja Jaichand of Lambagraon
Rear-Admiral Sir D. St. A. Wake
Lieut.-Gen. Sir Alfred Horsford Bingley
Sir Godfrey Butler Hunter Fell
Lieut.-Gen. Sir Thomas Joseph O'Donnell
Major-Gen. Sir Godfrey Williams
Sir Nicholas Dodd Beatson Bell
Sir William Sinclair Marris
His Highness Mehtar Sir Shuja-ul-Mulk of Chitral
Khan Bahadur Maulvi Sir Rahim Bakhsh
Sir James Herbert Seabrooke
Sir C. E. Low, I.C.S.
Maharaj Kunwar Sir Bhopal Singh
Nawab Sir Mir Shams Shah, I.S.O.
Lieut.-Gen. Sir Edward Locke Elliot
Lieut.-Gen. Sir Edward Altham Altham
Lieut.-Gen. Sir Charles Alexander Anderson
Lieut.-Gen. Sir Havelock Hudson
Major-Gen. Sir Wyndham Charles Knight
Major-Gen. Sir Herbert Aveling Raitt
Sir Herbert Guy Dering
Major-Gen. H. F. E. Freeland
Baron Montagu of Beaulieu
Brevet-Lieut.-Col. Sir Arnold Talbot Wilson
2nd-Lt. Meherban Sir M. V. Raje Ghorpade, Chief of Mudhol
The Hon'ble Sir W. Maude, I.C.S.
The Hon'ble Rai Bahadur Sir Bepin Krishna Bose, Kt.
Sir C. M. Stevenson Moore, I.C.S.
J. G. Cumming
H. J. Maynard
H. H. The Nawab of Palanpur
H. R. C. Dobbs
H. A. Crump
Sardar Arur Singh of Amritsar
Lieut.-Gen. Sir Richard Wapshare.
Major-Gen. Sir Willfrid Malleson
Major-Gen. Sir Patrick Hehir
The Maharaja of Sirmur.
The Nawab of Malerkotla
The Thakor Saheb of Limbdi
W. D. Sheppard
L. C. Porter
Lieut.-Col. A. B Dew
Nawab Khan-I-Zaman Khan, Chief of Amb
Nawab Haji Fateh Ali Khan Kazilbash
Raja Muhammad Nazim Khan Mir of Hunza
Major-Gen. W. R. Edwards, I.M.S.
E. Maconochie.
Sardar Kantaraj Urs.
Dr. W. H. Willcox.

Ex-Officio Companion (C. I. E.)

Sir Courtenay P. Ilbert

Honorary Companions (C. I. E.)

Laurent Marie Emile Beauchamp
Jean Etienne Justin Schneider
Haji Mohammad Ali Rais-ut-Tujjar
James Carruthers Rhea Ewing
Sheik Abdulla Bin Esa
Haidar Khan, Chief of Hayat Daud, Persian Gulf
Mirza Ali Karam Khan Shuja-i-Nizam, Dy. Governor of Bandar-Abbas
Lieut.-Col. Ghana Bhikram
Lieut. Col. Partab Jung Bahadur Rana
Major Alfred Paul Jacques Masson
Lieut.-Col. Gen. Sugiyama, Imperial Japanese Army
Lieut. Richard Beamish—(*Europe*)
Lieut. François Pierre Paul Razy—(*Europe*)
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Frederick William Hanson
Nawab Malik Khuda Baksh Khan, Tiwana
Nawab Maula Baksh
Colonel Vindeshri Prasad Singh
Sardar Lakhamgouda Basava Prabhu Sir Desai
Lieut.-Col. W. W. Clemesha, I.M.S.
Brevet-Lt.-Col. Napier George Barrow Goodfellow
Lieut.-Col. P. Francis Chapman
Major and Brevet-Lieut.-Col. H. J. Crossley
Lieut.-Col. (temporary Col.) W. A. Gordon
Lieut.-Col. J. D. Graham
Brevet-Lieut.-Col. (temporary Lieut.-Col.) C. E. Alexander
Major and Brevet-Lieut.-Col. W. H. Hamilton
Lieut.-Col. C. A. Sprawson
Major H. C. Prescott
Temporary Major (temporary Col.) J. C. Ward
Temporary Major C. F. Macpherson
Captain F. C. C. Balfour
Captain P. L. Bowers
H. A. Sams
H. F. Forbes
Major C. L. Peart
Brevet-Col. (temporary Brigadier-Genl.) H. De C. O'Grady
Lieut.-Col. A. de V. Willoughby-Osborne
Lieut.-Col. F. McConaghey
Lieut.-Col. J. R. Gaussen
Major G. B. Murray
Purushottamdas Thakurdas
Khan Bahadur Khwaja Yusaf Shah
N. E. Marjoribanks
Atul Chandra Chatarji
R. D. Bell
Rai Bahadur Rala Ram
Lieut.-Col. H. C. Beadon
H. C. Barnes
H. Clayton
C. B. Petman
F. A. M. H. Vincent
R. Clarke
M. J. Cogswell
Lieut.-Col. J. J. Bourke
Lieut.-Col. J. Stephenson
H. H. Haines
R. S. Hole
Cursetji Nowroji Wadia
E. Teichman
D. Clouston
C. A. Bell
Raja Bahadur Rao Jogendra Narayan Ray
W. J. Bradshaw
Lieut.-Col. R. A. Needham
J. Crosby
C. A. Innes
P. P. J. Wodehouse

Captain E. I. M. Barrett
S. F. Stewart
Major (acting Lieut.-Col.) P. L. O'Neill
Major G. G. Jolly
Major A. P. Manning
Lieut. (temporary Captain) H. H. F. M. Tyler
Col. H. W. R. Senior
Lieut.-Col. R. H. Maddox
Lieut.-Col. H. W. Bowen
Lieut.-Col. J. B. Keogh
Brevet-Lieut.-Col. E. A. Porch
Major (acting Lieut.-Col.) A. B. Fry
Major (acting Lieut.-Col.) A. V. W. Hope
Major (acting Lieut.-Col.) L. E. Gilbert
Lieut.-Col. W. D. A. Keys
Lieut-Col. W. M. Anderson
Major H. Murray.
Captain and Brevet-Major (temporary Lieut.-Col.) C. de L. Christopher
Captain and Brevet-Major F. M. Carpendale
Major (temporary Lieut.-Col.) A. H. C. Trench
Temporary Major L. F. Nalder
Captain (temporary Lieut.-Col.) C. G. Lloyd
Temporary Captain R. Marrs
Lieut. (temporary Col.) G. Evans
Lieut.-Col. S. H. Slater
Agha Mirza Muhammad
Sir E. Bonham-Carter
Major and Brevet-Lieut.-Col. J. H. Howell Jones
Brevet-Lieut.-Col. W. E. Wilson-Johnston
Major W. S. R. May
Temporary Captain (temporary Col.) W. R. Dockrill
Temporary Lieut. (temporary Major) G. M. O'Rorke
Capt. C. R. Wason
Capt. C. Mackenzie
Capt. J. B. Hanafin
Lieut.-Col. M. Synge.
Capt. (acting Major) M. C. Raymond
W. H. J. Wilkinson
Lieut.-Col. J. B. Jameson
Brevet.-Col. (temporary Brigadier-Genl.) A. G. Wauchope
Col. (temporary Brigadier-Genl.) G. F. White
R. W. Hildyard-Marris
Hon. Lieut. Mehr Mohammad Khan Bahadur
Brigadier-General R. M. Betham
Col. W. C. Black
Lieut.-Col. E. R. P. Bolleau
Lieut.-Col. W. L. J. Caery
Lieut.-Col. J. A. Cherry
Col. (temporary Brigadier-Genl.) G. Chrisiam
Col. (temporary Brigadier-Genl.) H. R. Cook
Col. (temporary Brigadier-Genl.) F. W. H. Cox
Col. G. M. Duff
Major (temporary Lieut.-Col.) E. G J. Hall
Major D. R. Hewitt.
Major L. Hirsch.
Lieut.-Col. C. Hodgkinson.
Major (temporary Lieut.-Col.) G. Howson
Lieut. (temporary Lieut.-Col.) K. M. Kirkhope
Lieut.-Col. F. C. Lane.
Lieut.-Col. (temporary Col.) J. H. Lawrence-Archer.
Col. R. S. Maclagan.
Major (temporary Lieut.-Col.) G. G. C. Maclean
Major C. N. Moberley.
Col. (temporary Brigadier-Genl.) H. C. Nanton
E. P. Newnham
Lieut.-Col. S. J. Rennie
Lieut.-Col. J. R. Reynolds
Lieut.Col. L. Stuart
Lieut.-Col. J. W. Watson
Lieut. (temporary Lieut.-Col.) R. B. Wilson
Major-Gen. N. G. Woodyatt
Lieut.-Col. H. N. Young
Lieut.-Col. E. L. Mackenzie
Col. (temporary Brigadier-General) F. W. D. Quinton
Lieut.-Col. C. N. Watney
Ressalder Habibur Rahman Khan, Khan Sahib
Lt.-Col. Charles Fairlie Dobbs
Major George Stuart Douglas
Major Charles Edward Edward-Collins
Brevet Col. Hugh Edward Herdon
Major Harold Berrridge
Brevet-Col. M. R. W. Nightingale
Sardar Bahadur Sardar Sundar Singh
H. Moncrieff Smith
F. St. J. Gebbie
Khan Bahadur Pir Baksh Walad Mian Muhammad
S. S. Ayyangar
J. A. Richey
F. W. Woods
A. T. Holme
G. G. Sim
Lieut.-Col. C. A. Smith
Lieut.-Col. F. R. Nethersole
R. S. Troup
M. A. Thompson
K. B. W. Thomas
J. A. Stevens
D. A. Thomson
A. Brebner
V. Dawson
G. Anderson
Col. Rao Bahadur Thakur Sadul Singh
Saiyid Nur-ul-Huda
Rai Bahadur Baikuntha Nath Sen
Col. John Anderson Dealy
Col. Harry Christopher Tytler
Col. A. L. Tarver
Col. Cyril Norman Macmullen
Col. (temporary Col. Commandant) Harry Beauchamp Douglas Baird
Col. Cecil Norris Baker
Lieut.-Col. Harry Dixon Packer
Temporary Lieut.-Col. John Francis Haswell
Brevet Lieut.-Col. Henry Charles Swinburne Ward
Brevet Lieut.-Col. Henry Francis Wickham
Major (temporary Lieut.-Col.) Duncan Ogilvie
Major (temporary Lieut.-Col.) James Scott Pitkeathly
Major Charles Edward Bruce,
Major Alexander Frederick Babonau
2nd-Lieut. (temporary Lieut.-Col. Arthur Vernon Hawkins
Ernest William Tomkins
Colonel Campbell Coffin
P. Harrison
W. C. Renouf
Abdul Majid (Assam)
Sorabji Bezonji Mehta
Lt.-Col. R. Verney
E. C. S. Shuttleworth
Lt.-Col. C. R. A. Bond
J. Reid
W. P. Cowie
C. W. E. Cotton
C. M. Hutchinson
Major F. H. Humphreys
Major F. W. Gerrard
R. S. Pearson

Raja Sifat Bahadur (Governor of Yasin.)
Khan Bahadur Muhammad Habibulla
C. T. Allen
C. B. Labouche
Cawasji Jehangir
A. K. Maitra
Col. Leslie Waterfield Shakespeare
Col. C. E. E. Francis Kirwan Macquoid
Capt. E. J. Calveley Hordern
John Comyn Higgins
John Henry Hutton
John Brown Marshall
Major Clendon Turberville Daukes
Nawab Mahammad Khurshaid Ali Khan of Dujana
Khan Bahadur Sayid Mehdi Shah
Diwan Bahadur Diwan Daulat Rai
M. Keane
J. D. Shifton
Lieut.-Col. P. S. M. Burlton
C. M. Webb
D. T. Chadwick
H. W. M. Ives
C. M. Baker
W. A. Marr
G. L. Corbett
Major E. H. S. James
J. T. Gwynn
Lieut.-Col. D. M. Davidson, I.M.S.
Lieut.-Col. F. O'Kinealy, I.M.S.
Lieut-Col. W. F. Harvey, I.M.S.
Lieut.-Col. L. A. Grimston
Lieut.-Col. John Lawrence Van Geyzel
Lieut.-Col. F. Muspratt
Major H. G. Vaux
A. C. Rumboll
H. C. Sampson
E. J. Butler
A. W. Dods
D. M. Dalal
Gopal Das Bhandari
Jadu Nath Mazumdar
J. B. Murzban
N. M. Joshi
H. E. A. Cotton
F. H. Brown
Hamid Khan
Sheikh Abdulla bin Jalowi Amir of Hassa, Mesopotamia
J. E. C. Jukes
E. Burdon
Nawab Muhammad Ahmad Said Khan of Chhitari
H. E. W. Martindell
A. Montgomerie
E. R. Abbot
J. C. Smith
P. B. Thomas
J. R. Cunningham
S. Cox
L. M. Crump
H. K. Briscoe
Lieut.-Col. H. R. Neville.
Lieut-Col. B. H. Deare, I.M.S.
H. V. Hare Scott
R. W. Church
Major L. M. Heath
Major L. E. Lang
Rai Bahadur Milkhi Ram
Rao Bahadur K. G. Damle
J. W. Mackinson
A. L. Playfair
Rai Bahadur A. C. Sen
Maganlal Thakordas Balmukandas Modi
Dr. M. N. Bannerjee
The Hon'ble Khan Bahadur Saiyid Abdul Majid, Assam
Major-General Smith, Eastern Command
Lieut.-Col. Hutchinson, Government of India
Mr. Rennie, North-West Frontier Province Service
Lieut -Col. Patterson, Ajmer-Merwara
Mr. McAlpin, Bengal
Mr. Blunt, United Provinces
Lieut.-Col. Entrican, Burma
Mr. Stewart of the Indian Police, Punjab
Mr. W. F. Hudson, I.C.S., Bombay
Mr. Hope, Superintending Engineer, Simla Imperial Circle
Mr. Meares, Electrical Adviser to the Government of India
Lieut-Col. Standage, Mysore
Major Goldie, Military Secretary to the Governor of Madras
Mr. Thomas, Madras
Mr. Moysey, Bombay
Mr. Macpherson, Bihar and Orissa
Mr. Maung Po Hla, Deputy Commissioner, Burma
Mr. Armstrong, Indian Police, Central Provinces
Mr. Williamson, Indian Police, United Provinces
Mr. Newmarch, late Accountant-General
Mr. Wathen, Khalsa College, Amritsar
Khan Bahadur Mir Sharbat Khan, Political Agent, Loralai, Baluchistan
Natha Singh Sardar Bahadur of the Alwar Infantry, Rajputana
Raja Manilal Singh of Roy of Chakdighi, Bengal
Khan Bahadur Nasarvanji Hormasji Choksy, Bombay Municipality
Lieutenant Raja Chandra Singh of Atra, Chandapur, Rae Bareli
Mr. Durrant, India Office
Mr. A. McLagan of Messrs. Turnbull, Gibson and Company, London

OFFICERS OF THE ORDER.

Secretary, Sir J. B. Wood.
Registrar, Col. Sir Douglas Dawson.

The Imperial Order of the Crown of India.

This Order was instituted Jan. 1, 1878, and for a like purpose with the simultaneously created Order of the Indian Empire. It consists of the Queen and Queen Mother with some Royal Princesses, and the female relatives of Indian Princes or of persons who have held conspicuous offices in connection with India. Badge, the royal cipher in jewels within an oval surmounted by an Heraldic Crown and attached to a bow of light blue watered ribbon, edged white. Designation, the letters C. I.

Sovereign of the Order.

THE KING-EMPEROR OF INDIA.

Ladies of the Order (C. I.)

Her Majesty The Queen
H. M. Queen Alexandra
H. M. the Queen of Norway
H. R. H. the Princess Royal
H. R. H. the Princess Victoria
H. R. H. the Princess Christian of Scheleswig-Holstein

H. R. H. the Princess Louise (Duchess of Argyll)
H. R. H. Princess Henry of Battenberg
H. I. and R. H. the Dowager Duchess of Saxe-Coburg and Gotha
H. R. H the Duchess of Albany
H. R. H. the Duchess of Cumberland
H. R. H. the Princess Frederica Baroness of von Pawel-Rammingen
H. R. H. the Dowager Grand Duchess of Mecklenburg-Strelitz
H. I. & R. H. the Grand Duchess Cyril of Russia
H. R. H. the Hereditary Princess of Hohenlohe-Langenburg
H. R. H. the Crown Princess of Sweden
H. R. H. the Princess Patricia of Connaught
H. R. H. the Princess Victoria Elizabeth Augustine Charlotte, Hereditary Princess of Saxe-Meiningen
H. H. the Princess Victoria of Schleswig-Holstein
H. H. the Princess Marie-Louise of Schleswig-Holstein
Baroness Kinloss
Dowager Countess of Mayo
Lady Jane Emma Crichton
Dowager Countess of Lytton
Dowager Baroness Lawrence
Lady Temple
Dowager Baroness Napier of Magdala
Lady Grant Duff
Dowager Marchioness of Dufferin and Ava
Lady Randolph Spencer-Churchill
Baroness Reay
H. H. Maharani of Cooch-Behar
Marchioness of Lansdowne
Baroness Harris
H. H. Maharani of Gwalior
Constance Mary Baroness Wenlock
H. H. Maharani Sahib Chimna Bai Gaekw. r
H. H. Rani Sahib of Gondal
H. H. the Dowager Maharani of Mysore
Lady George Hamilton
H. H. the Maharani Sahiba of Udaipur
Alice, Baroness Northcote
Nora Henrietta, Countess Roberts
Amelia Maria, Lady White
Mary Katherine, Lady Lockhart
Baroness Ampthill
The Lady Willingdon
Countess of Minto
Marchioness of Crewe
H. H. Begum of Bhopal

THE KAISAR-I-HIND MEDAL.

This decoration was instituted in 1900, the preamble to the Royal Warrant—which was amended in 1901 and 1912—being as follows:—"Whereas We, taking into Our Royal consideration that there do not exist adequate means whereby We can reward important and useful services rendered to Us in Our Indian Empire in the advancement of the public interests of Our said Empire, and taking also into consideration the expediency of distinguishing such services by some mark of Our Royal favour: Now for the purpose of attaining an end so desirable as that of thus distinguishing such services aforesaid, We have instituted and created, and by these presents for Us, Our Heirs and Successors, do institute and create a new Decoration." The decoration is styled "The Kaisar-i-Hind Medal for Public Service in India" and consists of two classes. The Medal is an oval shaped Badge or Decoration—in gold for the First Class and in silver for the Second Class—with the Royal Cypher on one side and on the reverse the words "Kaisar-i-Hind for Public Service in India;" it is suspended on the left breast by a dark blue ribbon.

Recipients of the 1st Class.

Abdus Samad Khan of Rampur
Achariyar, Diwan Bahadur Tirumalai Desika
Advani, M. S.
Ahmad, Khan Bahadur Qazi Khalil-ud-Din
Alexander, A. L.
Allnut, The Rev. Samuel Scott
Amarchand, Rao Bahadur Ramnarayan
Ampthill, Margaret, Baroness
Anderson, The Rev. H.
Ashton, Albert Frederick
Balfour, Dr. Ida
Banerji, Sir P. C.
Barber, Benjamin Russell
Barnes, Major Ernest
Basu, Sir Kailas Chandra, Rai Bahadur
Beals, Dr.; American Marathi Mission, Bombay.
Bear, Mrs. Georgiana Mary.
Beaty, Francis Montagu Algernon
Beck, Miss Emma Josephine
Bell, Lt.-Col. Charles Thornhill
Benson, Doctor (Miss) A. M.
Benson, Lady
Bentley, Dr. Charles Albert
Bhandari, Rai Bahadur Gopal Das
Bikanir, Maharaja of
Bingley, Major General Alfred
Biwalkar, Sardar Parashram Krishnarao
Bonig, Max Carl Christian
Booth-Tucker Frederick St. George de Lautour
Bosanquet, Oswald Vivian
Bott, Captain R. H.
Bramley, Percy Brooke
Bray, Denys DeSaumarez
Broadway, Alexander
Brown, Rev. A. E.
Brown, Rev. W. E. W.
Brunton, James Forest
Buchanan, Rev. John
Bull, Henry Martin
Burn, Richard
Burnett, General Sir Charles John
Caleb, Dr. C. C.
Calnan, Denis
Campbell, Colonel Sir Robert Neil
Campion, John Montriou
Carleton, Marcus Bradford
Carlyle, Lady
Carmichael, Lady
Carter, Edward Clark
Castor, Lieut.-Col. R. H.
Chand, Sakhi, Rai Bahadur
Chandra, Rai Bahadur Hari Mohan
Chapman, R. A. B.
Chatterton, Alfred

Chaudhuri, Raja Sarat Chandra Rai
Chetty, Dewan Bahadur K. P. Puttanna
Chinai, Ardeshir Dinshaji
Chitnavis, Shankar Madho
Coldstream, William
Comley, Mrs. Alice
Copeland, Theodore Benfey
Cornelia Sorabji, Miss (Bar to Kaisar-i-Hind Gold Medal)
Cousens, Henry
Cox, Arthur Frederick
Crawford, Francis Colomb
Crouch, H. N.
Currimbhoy, Mahomedbhoy
Dane, Lady
Darbhanga, Maharaja of
Darbyshire, Miss Ruth
Das, Ram Saran
Davies, Arthur
Davies, Rev. Can. A. W.
Davies, Mrs. Edwin
Davis, Miss Gertrude
Dawson, Brevet-Colonel Charles Hutton
Dayal Seth Jay
Deane, Lieutenant-Colonel Herbert Edward
Debi, Ravi Murari Kumari
deLotbiniere, Lieutenant-Colonel Alain C. Joly
Devdhar, G. K.
Dewas (Junior Branch), Maharaja of
Dhar, Her Highness the Rani Sahiba Luxmibai, Pavar of
Dhingra, Dr. Behari Lal
DuBern, Amedee George
DuBern, Jules Emile
Dyson, Colonel Thomas Edward
Earle, The Hon'ble Sir Archdale
Evans, The Rev.
Ewing, The Rev. Dr. J. C. R.
Ferard, Mrs. Ida Margaret
Fosbrooke, Mrs. M. E. A.
Francis, Edward Belcham
Garu, Diwan Bahadur Agaram Subbarayalu Reddiyar
Garu, Diwan Bahadur M. Ramachandra Rao Pantulu
Ghosal, Mr. Jyotsnanath
Glazebrook, N. S.
Glenn, Henry James Heamey
Gillmore, The Rev.
Gonzaga, Rev. Mother
Graham, The Rev. John Anderson
Graham, Mrs. Kate
Grattan, Colonel Henry William
Guilford, The Rev. E. (with Gold Bar)
Gwalior, Maharaja of
Gwyther, Lieut.-Colonel Arthur
Hahn, The Rev. Ferdinand
Haig, Lieutenant-Colonel Patrick Balfour
Hall, Harold Fielding Patrick
Hamilton, Major Robert Edward Archibald
Hanson, The Rev. O.
Harvest, Lieut.-Colonel Herbert de Vere
Hatch, Miss Sarah Isabel
Hildesley, The Rev. Alfred Herbert
Hoeck, Rev. Father L. V.
Hodgson, Edward Marsden
Hogan, W. J. Alexander
Holderness, Sir Thomas William
Home, Walter
Howard, Mrs. Gabrielle Louise Caroline
Hoyland, John Somerwell.
Hume, The Rev. R. A.
Husband, Major James
Hutchinson, Sir Sydney Hutton Cooper
Hutchinson, Major William Gordon
Hutwa, The Maharani Jnan Manjari Kuari of
Hydari, Mrs. Amina
Irvine, Lieutenant-Colonel Thomas Walter
Ismail, Muhammad Yusaf
Ives, Harry William Maclean
Jackson, Rev. James Chadwick
James, Lieutenant-Colonel Charles Henry
Jankibai
Josephine, Sister
Kapur, Raja Ban Bihari
Kaye, G. R.
Kelly, The Rev. E. W.
King, Mrs. D.
Klopsch, Dr. Louis
Knox, Lady (Bar to Kaisar-i-Hind Gold Medal)
Ko, Taw Sein
Kothari, The Hon'ble Mr. Jehangir Hormusji
Lamb, The Hon'ble Sir Richard Amphlett
Lindsay, D'Arcy
Ling, Miss Catharine Frances
Lovett, The Hon'ble Mr. Harrington Verney
Luck, Wilfred Henry
Lukis, Lady
Lyall, Frank Frederick
Lyons, Surgeon-General Robert William Steele
MacLean, Rev. J. H.
Macwatt, Lieutenant-Colonel Robert Charles
Madhav Rao, Vishwanath Patankar
Mahant of Emar Math, Puri
Malegaon, Raje of
Malvi Tribhuvandas Narottamdas
Manockchand, Seth Motilal
Mann, Dr. Harold
Manners-Smith, The Hon'ble Mr. Francis St. George
Mary of St. Paula, Rev. Mother
Matthews, Rev. Father.
Mayes, Herbert Frederick
McCarrison, Major Robert
McCloghry, Colonel James
McNeel, The Rev. John
Mehta, Dr. D. H.
Meston, Rev. W.
Millard, Walter Samuel
Miller, The Rev. William
Minto, Mary Caroline
Monahan, Mrs. Ida
Monahan, Mrs. Olive
Moolgaokar, Dr. S. R.
Morrison, F. E.
Morgan, George
Muir, Rev. E.
Muir Mackenzie, Lady Therese
Nariman, Dr. Temulji Bhikaji
Narsinghgarh, Her Highness the Rani Shiv Kunwar Sahiba of
Nepalia, Rani of Tehri
Neve, Dr. Arthur
Neve, Dr. Earnest
Nichols, the Rev. Dr. Charles Alvord
Nicholson, Sir Frederick Augustus
Nisbet, John
Noble, The Rev.
Noyce, William Florey
O'Byrne, Gerald John Evangelist
Oh, Maung and Ba (*alias*) Ahmedullah
Oldham, Charles Evelyn Arbuthnot William
O'Donnel, Dr. Thomas Joseph
O'Meara, Major Eugene John
Panna, Maharani of
Paranjpye, Raghunath Purshottam

Pears, S. D. A. D.
Pedley, Dr. Thomas Franklin
Pennell, Mrs. A. M.
Pestonji, Dhunjishaw
Cooverji, Khan Bahadur
Phelps, Edwin Ashby
Pickford, Alfred Donald
Pitcher, Colonel Duncan George
Pittendrigh, Rev G.
Plamonden, Rev. Mother S. C.
Plant, Captain William Charles Trew Gray Gambier
Platt, Dr. Kate
Pollen, Dr. J.
Poynder, Lieut.-Colonel John Leopold
Prasad, Lt.-Col. Kanta
Price, John Dodds
Ramabai, Mrs. Pandita
Ray, Rao Jogendra Narayan, Raja Bahadur.
Reed, Miss M.
Reid, Frederick David
Reynolds, Leonard William
Richmond, Mr. Thomas
Rivington, The Rev. Canon, C. S.
Roberts, Dr. N. G.
Robson, Dr. Robert George
Rost, Lt.-Col. Ernest Reinhold
Row, Dr. Raghavendra
Roy, Babu Harendra Lal
Sailana, Raja of
Samthar, Maharaja of
Sanderson, Lady
Sarabhai Ambalal
Scott, Mary H. Harriot
Scudder, Rev. Dr. Lewis Rousseau
Scudder, Miss Ida
Sell, The Rev. Canon Edward
Semple, Lieut.-Colonel Sir David
Seshagiri Rao Pantulu Garu
Sharp, Henry
Sharpe, Walter Samuel
Shepherd, Rev. James
Sheppard, Mrs. Adeline B.
Sheppard, William Didsbury
Shillidy, the Rev. John
Shore, Lieut.-Colonel Robert
Shoubridge, Major Charles Alban Grevis
Simon, The Rev. Mother
Singh, Munshi Ajit
Singh, Raja Bhagwan Bakhsh
Singh, Rai Hira
Singh, Raja Kamaleshwari Pershad
Sinha, Purnendu Narayan
Skinner, The Rev. Dr. William
Skrefsrud, The Rev. Larsorsen
Smith, Lieut.-Colonel Henry
Sorabji, Miss Cornelia
Southon, Major Charles Edward
Spence, Christina Philippa Agnes
St. Leger, William Douglas
St. Lucie, Reverend Mother
Stanes, Robert
Stokes, Dr. William
Sukhdeo Prasad, Pandit
Surat Kuar, Rani Sahiba
Sutherland, Rev. W. S.
Tabard, The Rev. Antoine Marie
Talati, Edalji Dorabji
Taylor, The Rev. George Pritchard
Taylor, Dr. Herbert F. Lechmere
Thakral, Lala Mul Chund
Thomas, The Rev. Stephen Sylvester
Thomas, The Rev.
Thurston, Edgar
Tilly, Harry Lindsay
Tindall, Christian
Tucker, Major William Hancock
Turner, Dr. John Andrew
Tyndale-Biscoe, The Rev. Cecil Earle
Tyrrell, Major Jasper Robert Joly
Vadakke Kurupam Parukutti Netyaramma1
Vandyke, Frederick Reginald
Van Hoeck, Rev. Father Louis, S.J.
Vas, J.
Vaughan, Lieut. Colonel Joseph Charles Stœlke
Venugopala, Raja Bahadur
Vernon, Mrs. Margaret
Victoria, Sister Mary
Wadhwan, The Rani Sahib Sita Bai of
Wadia, Sir Hormasji Ardeshir
Wagner, Rev. Paul
Wake, Lieut.-Colonel Edward St. Aubyn (with Gold Bar)
Wakefield, George Edward Campbell
Walker, Lady Fanny
Walter, Major Albert Elijah
Wanless, Mr. W. J.
Ward, Major Ellacott Leamon
Waterhouse, Miss Agnes May
Webb, Miss M. V.
Westcott, The Rt. Rev. Dr. Foss.
Wheeler, The Rev. Edward Montague
Whitehead, Mrs. J.
Wilkinson. Lieut.-Colonel Edmund
Willingdon, The Lady
Wilson-Johnston, Joseph
Winter, Edgar Francis Latimer
Wood, Arthur Robert
Yain, Lee Ah
Young, The Rev. John Cameron
Younghusband, Arthur Delaval
Younghusband, Lieut.-Col. Sir Francis Edward

Recipients of the 2nd Class.

Abul Fath Moulvi Saiyed
Abdul Ghani
Abdul Hussain, Mian Bhai
Abdul Kadir
Abdul Majid Khan
Abdur Razzak Khan, Subadar
Abinash Chandra Banerjee, Rai Bahadur
Acharlyar, Mrs. Sita Thiruvenkata
Achariyar, M. A. P. Tirunarayana
Adelaide, Doctor Miss.
Advani, Mrs. Motiram
Agha Mohamed Khalil-Bin-Mohamed Karim
Ahmad, Capt. Dabiruddin
Ahmad, Mr. Mukhtar
Alfred, Miss A.
Allen, Miss Fannie
Allen, Mrs. M. O.
Ali Shabash, Shaikh, Khan Saheb
Allen, Rev. Frank Van
Ammal Rishiyr Subrahmanya Ayyar Subbu Lakshmi
Amar Nath, Lala
Amar Singh
Anandnath Chatterji.
Anastasie, Sister
Anderson, Andrew
Andrew, The Rev. Adam
Anscomb, Major Allen Mellers
Antia, Jamshedji Merwanji
Ashton, Dr. Robert John
Askwith, Miss Anne Jane
Atkinson, John William

Atkinson, Lady Constance
Augustin, The Rev. Father
Aung, Mrs. Hla
Aziz Husain; Khan Sahib Mir
Badri Parshad
Baker, Honorary Major Thomas
Ball, Miss Marguerite Dorothy
Banerji, Professor Jammi Nath
Banks, Dr. Charles
Bapat, Risaldar Sadashiva Krishna
Barbara, Mother
Barclay, Mrs. Edith Martha
Bardsley, Miss Jane Blissett
Barnabas, Mr., Burma
Barnett, Miss Maude
Barstow, Mrs. Melaine
Barton, Mrs. Sybil
Baw, Maung Kan
Bawden, Rev. S. D.
Bayley, Lieut.-Colonel Edward Charles
Beatson-Bell, Sir Nicholas Dodd
Beadon, Dr. M. O'Brien
Beg, Mirza Kalich Beg Fridun
Benjamin, Mrs.
Best, James Theodore
Beville, Lieut.-Colonel Francis Granville
Bhagwandas, Bai Zaoerbai
Bhajan Lal
Bhan, Lala Udhai
Bhide, Raoji Janardhan
Bhutt, Chhotelal Goverdhan
Bihari Lal
Birla, Rai Bahadur Baldeo Das
Bisheshwar Nath, Lala
Bissett, Miss Mary Ronald
Biswas, Babu Anonda Mohan
Blackham, Lieut.-Colonel Robert James
Blackwood, John Ross
Blake, The Rev. William Henry
Blenkinsop, Edward Robert Kaye
Booth, Miss Mary Warburton
Bolster, Miss Anna
Borah, Balinarayan
Bose, Miss Kiroth
Bose, Miss Mona
Botting, W. E.
Bowen, Griffith
Brahmanand, Pundit
Brander, Mrs. Isabel
Bray, Lady
Bremner, Lt.-Col. Arthur Grant
Brock, Miss Lilian Winifred
Brough, The Rev. Anthony Watson
Browne, Charles Edward
Brown, Dr. Edith
Bucknall, Mrs. Mary
Burt, Bryce Chudleigh
Butt, Miss L.
Cain, Mrs. Sarah
Caleb, Mrs. M.
Campbell, The Rev. Andrew
Campbell, Miss Gertrude Jane.
Campbell, Miss Kate
Campbell, Miss Susan
Campbell, Miss Mary Jane
Campbell, The Rev. Thomas Vincent
Carmichael, Miss Amy Wilson
Carr, Miss Emma
Carr, Thomas
Cassels, Mrs. Laura Mary Elizabeth
Catherine, Sister
Cattell, Major Gilbert Landale
Cecilia, Sister Fannie
Chamberlain, The Rev. William Isaac
Chandler, The Rev. John Scudder
Chirag Din, Seth
Chitale, Ganesh Krishna
Chogmal, Karnidhan
Churchward, P. A.
Chye, Leong
Clackmore, Mr.
Clancey, John Charles
Clark, Herbert George
Clerke, Honorary Major Louis Arthur Henry
Clutterbuck, Peter Henry
Commissariat, Miss S. H.
Coombs, George Oswald
Coombes, Josiah Waters
Cooper, Dosabhai Pestonji, Khan Bahadur
Correa, Miss Marie
Corthorn, Miss Alice
Corti, The Rev. Father Fanshi, S.J.
Cottle, Mrs. Adela
Cox, Mrs. E.
Coxon, Stanley William
Crow, Charles George
Cumming, James William Nicol
Cummings, The Rev. John Ernest
Cutting, Rev. William
DaCosta, Miss Zilla Edith
Dadabhoy, Mrs. Jerbanoo
Dalrymple-Hay, Charles Vernon
Daniel, J.
Daniels, Miss
Dann, Rev. George James
Das, Ram, Lala
Das, Mathura, Lala
Das, Niranjan
Dass, Mallik Narain
Datta, Dr. Dina Nath Pritha
Davies, Miss Harriet
Davis, Miss B. E.
Davys, Mrs. M. L.
Dawe, Miss Ellen
Dawson, Alexander Thomas
Dawson, Mrs. Charles Hutton
Deane, George Archibald
Deoji, Hazi Ahmed, Khan Sahib
DeKantzow, Mrs. Marv Aphrasia
DeLa Croix, Sister Paul
Desmond, J.
Daniels, Miss.
Devi, Bibi Kashmiri
Dew, Mrs. A. B.
DeWachter, Father Francis Xavier
Dewes, Lieut.-Colonel Frederick Joseph
Dexter, T.
Dharm Chand, Lala
Dilshad Begum
Dip Singh, Thakur
Dodson, Dr. E. I.
Drummond, Rev. C. C.
Drysdale, Mrs Christiana Mary
Dube, Bhagwati Charan
Dundas, Charles Lawrence
Dunlop, Alexander Johnstone
Dunn, Miss L. E.
Durjan Singh, Thakur
Dutta, Mehta Harnam
Duval, Mrs. Ethel Aldersey
Dwane, Mrs. Mary
Eagles, Thomas Cazaly
Eaglesome, George
Edgell, Lieut.-Colonel Edward Arnold
Edward, R.
Elwes, Mrs. A.

Emanuel, Mrs.
Evans, The Rev. John Ceredig
Evans, Miss Josephine Annie
Faridoonji, Mrs. Hilla
Farrer, Miss Ellen Margaret
Farzand Ahmad, Khan Bahadur, Kazi Saiyid
Fernandez, A. P.
Ffrench, Lieut.-Colonel Thomas
Flashman, Thomas Charles
Fleming, James Francis
Fletcher, Miss
Flint, Dr. E.
Foglieni, Rev. J. P.
Forman, The Rev. Henry
Fox, Alfred Charles
Frances, Sister Jane
Fraser, Robert Thomson
Fyson, Hugh
Gajjar, Mrs. Shivagauri
Galbibai, Bai
Gandhy, Mr. Pestonji Jamsetji
Garthwaite, Liston
Gateley, Thomas Joseph
George, Miss Jessie Eleanor
Ghose, Mahatap Chandra
Giffard, Mrs. Alice
Gilman, Edward P. Reuben
Godfrey, Thomas Leonard
Goldsmith, The Rev. Canon Malcolm George
Goodbody, Mrs.
Gorman, Patrick James
Goswami, Sri Sri Naradev Dakhinpat Adhikar
Gowardhandas, Chatrabhuj
Govind Lal, Lala
Grant, Lieut.-Colonel John Weymis
Grant, Mrs., *nee* Miss Lilian Blong
Grant, Miss Jean
Grant, The Rev. John
Grant, Miss Maria Alice
Gray, Mrs. Hester
Gray, Commissary William David
Greany, Peter Mawe
Greenfield, Miss R.
Greg, L. H.
Griessen, Albert Edward Pierre
Gulliford, The Rev. Henry
Gumbley, Mr. Douglas
Gune, Trimbak Raghunath
Gyi, Maung Pet
Hadow, Rev. Frank Burness
Haiyati Malik
Hanrahan, W. G.
Harding, Miss C.
Harris, Dr. B.
Harris, Miss S.
Harrison, Henry
Harrison, Mrs. M. F.
Harrison, Robert Tullis
Hart, Miss Louisa
Harvey, Miss Rose
Haworth, Major Lionel Berkeley Holt
Hayes, Miss Mary Lavinia
Hayes, Captain P.
Henderson, Miss Agnes
Hickman, Mrs. Agnes
Hicks, Rev. G. E.
Higgins, Andrew Frank
Hill, Elliott
Hill, Henry Francis
Hoff, Sister, W. J. K.
Hoffman, The Rev. Father John, S.J.
Holbrooke, Major Bernard Frederick Rope
Holden, Major Hyla Napier
Holland, Dr. Henry Tristram
Homer, Charles John
Hoogewerf, Edmund
Hope, Dr. Charles Henry Standish
Hopkyns, Mrs. E.
Houghton, Henry Edward
Hughes, Frank John
Hughes, Miss Lizbeth Bell
Hunter, Honorary Captain James
Hutchison, Dr. John
Ibrahim, Maulvi Muhammad
Ihsan Ali
Inglis, Mrs. Ellen
Jackson, Mrs. Emma
Jackson, Mrs. K.
Jaijee Bai (Mrs. Petit)
Jainath, Atal Pandit
Jambusarvala, A. Hargovandas
Jivanandan
Joglekar, Rao Bahadur Ganesh Venkatesh
John, Rev. Brother
Johnston, Augustus Frederick
Johnstone, Mrs. Rosalie
Jones, The Rev. John Peter
Jones, The Rev. Robert
Jones, The Rev. John Pengwern
Jones, Mrs. A. V.
Joshi, Mr. Keshavlal Durgashankar
Joshi, Narayan Malhar
Joshi, Trimbak Waman
Joss, Miss F.
Joti Prasad, Lala
Joti Ram
Joyce, Mrs. E. L.
Judd, C. R.
Jugaldas, M.
Jung, Sher, Khan Bahadur
Jwala Prasad, Mrs.
Jwala Singh, Sirdar
Kalubava, Azam Kesarkhan
Kanow, Yasuf
Kapadia, Miss Motibai
Karve, Dhondo Keshav
Keene, Miss H.
Kelavkar, Miss Krishnabai
Kelly, Claude Cyril
Kelly, Miss Eleanor Sarah
Ker, Thomas
Kharshedji, Miss S. K.
Khujoorina, Nadirshah Nowrojee
Kidar Nath, Lala
King, Robert Stewart
Kirloskar, Lakshman Kashinath
Kitchin, Mrs. M.
Knight, H. W.
Knollys, Major Robert Walter Edmond
Knox, Major Robert Welland
Kothewala, Mulla Yusuf Ali
Kreyer, Lieut.-Colonel Frederick August Christian
Kugler, Miss Anna Sarah
Kumaran, P. L.
Kyaw, Maung Htim
Lajja Ram
Lal, Bihari
Lal, Pandit Nand
Lamb, Dr. J.
Lambourn, G. E.
Lang, John
Langhorne, Frederick James
Lankester, Dr. Arthur Colborne
Latham, Miss J. L.
Laughlin, Miss L. H. M.

Lawrence, Captain Henry Rundle
Lawrence, Henry Staveley
Laxmidas Pitamberdas.
Lear, A. M.
Leslie-Jones, Leycester Hudson
Lloyd, Miss Elizabeth
Locke, Robert Henry
Low, Charles Ernest
Luck, Miss Florence Ada
Lund, George
MacAlister, The Rev. G.
Mackay, Rev. J. S.
Mackenzie, Alexander McGregor
Mackenzie, Howard
Mackenzie, Miss Mina
Mackinnon, Miss Grace
Macleod, Lieut.-Colonel John Norman
Mac Kellar, Dr. Margaret
McIlwrick, L.
Macnaghten, Hon. Florence Mary
Macphail, Miss Alexandrina Matilda
Macphail, The Rev. James Merry
Macrae, The Rev. Alexander
Madan, Mr. Rustamji Hormasji
Maddox, Lieut.-Colonel Ralph Henry
Madeley, Mrs. E. M.
Mahadevi, Srimati
Mahommed Allanur Khan
Maiden, J. W.
Maitra Babu Bhuban Mohan
Mallik, Sashi Bhusan
Maracan, Esmail Kadir
Margaret Mary, Sister
Marler, The Rev. Frederick Lionel
Mary of St. Vincent, Sister
Mary, Sister Eleanor
Masani, Rustam Pestonji
Mathias, P. F.
McCowen, Oliver Hill
McDonald, Joseph James
McGregor, Duncan
McIlwrick, Leslie
McKenzie, Miss Alice Learmouth
Mead, Rev. Cecil Silas
Mehta, Khan Saheb M. N.
Mehta, Vaikuntrai Lallubhai
Mill, Miss C. R.
Misra, Miss Sundri Singh
Mitcheson, Miss.
Mitter, Mrs.
Moens, Mrs. Agnese Swettenham
Mohammed Khan
Moitra, Akhoy Kumar
Monica, The Rev. Mother
Moore, Mother T.
Moore, Nursing Sister Dora Louisa Truslove
Moore, Miss Eleanor Louisa
Morgan, Miss Elizabeth Ellen
Morris, Major Robert Lee
Motilal, Seth of Piparia
Mount, Captain Alan Henry
Moxon, Miss Lais
Mozumdar, Jadu Nath
Mudaliar, Bangalore Perumal Annaswami
Mudali, Valappakkam Daivasigomoni Thandavaroyan
Muhammad Yusuf, Shams-Ul-Ulama, Khan Bahadur
Mukharji, Babu Jogendra Nath
Mukerji, Babu A. K.
Muller, Miss Jenny
Murphy, Edwin Joseph
Nag, Mrs. Sasi Mukhi
Naimullah, Mohamed
Naoum Abbo
Napier, Alan Bertram
Narain, Har
Narayanjee Laljee
Narayan Singh, Rai Sahib
Narayanrao Yeshwant Mirikar
Nariman, Khan Bahadur Manekji Kharsedji
Narpat Singh, Babu
Nasrulla Khan, Mirza
Nicholson, Rev.
Newton, Miss Jeanie
Norris, Miss Margaret
O'Maung Po
O'Brien, Lieut.-Colonel Edward
O'Conor, Brian Edward
O'Hara, Miss Margaret
Old, Frank Shepherd
Oldreive, Rev. F.
Orman, Honorary Captain Charles Henry
Orr, Adolphe Ernest
Orr, James Peter
Orr, Mrs. Amy
Outram, The Rev. A.
Owen, Major Robert James
Owen, C. B.
Pal, Babu Barada Sundar
Palin, Major Randle Harry
Pandit, Vasudeo Ramkrishna
Parbati Bai
Park, The Rev. George W.
Parker, Miss Ada Emma
Parker, Dr. (Miss) H. E.
Parker, Mrs. R. J.
Parsons, Ronald
Patch, Miss K.
Patel, Barjorji Dorabji
Patel, Jeona
Pathak, Ram Sahai
Paterson, Miss Rachel
Patrick, Sister
Pearson, E. A.
Penn, The Rev. W. C.
Perroy, Rev. Father
Pershad, Pundit Thakur
Peters, Lieut.-Colonel Charles Thomas
Petigara, R. J.
Pettigrew, The Rev. William
Phadke, V. K.
Phailbus, Miss Rose Margaret
Phelps, Mrs. Maude Marion
Philip, Mrs. A. J.
Pierce, Miss Ada Louise
Pillay, Chinnappa Singaravalu
Pinney, Major John Charles Digby
Pinto, Miss Preciosa
Plowden, Lt.-Col. Trevor Chichele
Posnett, Miss E.
Powell, John
Prabhu, Anantrao Raghunath
Prance, Miss G.
Prasad, Capt. Tulsi of Nepal
Pribhdas Shevakram
Price, The Rev. Eustace Dickinson
Prideaux, Frank Winckworth Austice
Purshotamdas Thakurdas
Pyo, Maung Tet
Rai, Babu Ram Kinkar
Raikes, Mrs. Alice
Rait, Miss Helen Anna Macdonald
Rajadnya, R. N.
Raj Bahadur, Pandit

Rajendra Pal, Tika Raul
Ram, Mr. Bhagat
Ramchandra, Daji
Ramgopal, Mallani, Seth
Ram Singh, M.V.O.
Ranade, Mrs. Ramabai
Ranjit Singh
Rattan Chand
Rattansi Mulji
Raushan Lal
Ray, Babu Sarat Chandra
Ray, Harendra Nath
Reed, Lady
Richardson, Mrs. Catherine Stuart
Rita, Stiffani Edward
Rivenburg, The Revd. Dr.
Robarts, Captain Charles Stuart Hamilton
Roberts, The Rev.
Robinson, James
Robinson, Lieut.-Colonel William Henry Banner
Rocke, Captain Cyril E. A. Spencer
Roe, Colonel Cyril Harcourt
Roe, Mrs. Edith Mary
Rukhmabai, Dr.
Rulach, Rev. George Bernard
Rustomji Faridoonji
Rutherford, Miss Mary Elizabeth
Sadiq, Shams-ud-din
Sadlier, A. W. Woodward
Sahai, Ram
Sahan Ram Kali
Sahay, Lala Deonath
Saint Monica, The Rev. Mother
Salkield, Tom
Samarth, Wasudeo Mahadeo
Samuels, Joseph
Sankara Kandar Kandaswami Kandar
Savidge, Rev. Frederick William
Sawhney, Lala-Isher Das
Schultze, The Rev. Frederick Volkomor Paul
Scotland, Lieut.-Colonel David Wilson
Shah, Babu Lal Behari
Shah, Mohamed Kamal.
Shah, Mohammad Nawaz
Shah, Reverend Ahmad
Shamnath Rai Bahadur
Shaw, Mrs. Hawthorne
Sheard, Mr. E.
Shircore, William
Shroff, Dr. E. D.
Shyam Rikh, Raja Francis Xavier
Shyam Sunder Lall
Simcox, Arthur Henry Addenbrooke
Simkins, Charles Wylkins
Simon, Sister M.
Simonsen, J. L.
Simpson, Miss J. P.
Sinclair, Reginald Leaby
Singh, Apji Dhul
Singh, Makkhan
Singh, Rev. P L.
Singh, Babu Ramdhari
Singh, Rai Bahadur Sundar
Singh, Rukhmina
Singh, Bhai Lehua
Singh, Bhai Takhut
Singh, Risaldar Major, Hanwant
Singh, Sitla Baksh
Singh, G. Sher
Singh, Sohan
Singhe, Miss L. N. V.
Small, Miss J. M.
Smith, Miss Ellen
Smith, The Rev. Frederick William Ambery
Smith, Mrs. Henry
Smith, Miss Annie Caroline
Sommerville, The Rev. Dr. James
Sri Ram Kunwar
Starte, Oliver Harold Baptist
Steel, Alexander
Steele, The Rev. John Ferguson
Stephens, John Hewitt
Stephens, Mrs. Grace
Stevens, Mrs. (Ethel)
Stevenson, Surgeon-General Henry Wickham
Stewart, Miss E. F.
Stewart, Major Hugh
Stewart, Mrs. Lilian Dorothea
Stewart, Thomas
St. Joseph, J. D.
Strip, Samuel Algernon
Strutton, Rev. H. H.
Stuart, Dr. (Miss) Gertrude
Sultan Ahmed Khan
Sunder Lal
Sundrabai, Bai
Swain, Mrs. Walker
Swainson, Miss Florence
Swiss, Miss Emily Constance
Talcherkar, Mr. H. C. A.
Talyarkhan, Mrs. M.
Taleyarkhan, Mr. Manekshah Cawasha
Talib Mehdi Khan, Malik
Tambe, Dr. Gopal Rao Ramchandra
Tarafdar, Mr. S. K.
Tara Dutt Gairola
Tarapurwalla, Fardunji Kuvarji
Taylor, Rev. Alfred Prideaux
Taylor, Mrs. Florence Prideaux

Taylor, John Norman
Tha, Maung Po
Tha, Maung Shwe
Thein, Maung Po
Theobald, Miss
Thomas, Mrs. Mabel Fox
Thomas, Samuel Gilbert
Thompson, R. C.
Thomssen, The Rev. G. Nicholas
Thorn, Miss Bertha
Thoy, Herbert Dominick
Timothy, Samuel
Todd, Capt.
Tomkins, Lionel Linton
Tudball, Miss Emma
Turner, Mrs. Vera
Udipi Rama Rao
Umar Khan, Malik Zorawar Khan
Vajifdar, Mrs. Hormusji Maneckji
Vale, Mrs. K.
Valpy, Miss K.
Vaughan-Stevens, Dudley Lewis
Vijayaraghava Acharyar
Vines, Thomas Humphrey
Visvesvaraya Mokshagundam
Wait, Robert William Hamilton
Wakefield, George Edward Campbell
Walayatullah, Khan Bahadur Hafiz Muhammad
Walewalker, P. Baburao
Waller, Frederick Chighton
Wanless, Dr. William James
Wares, Donald Horne
Webb-Ware, Mrs. Dorothy
Weighell, Miss Anna Jane
Western, Miss Mary Priscilla
White, Miss J.
Wildman, Miss Elizabeth Annie
Wilkinson, Mrs. A.
Wilson, Mrs. E. R. B.
Wince, Miss Jane
Wiseman, Capt. Charles Sheriffe
Woerner, Miss Lydia
Wood, The Rev. A.
Wylie, Miss Iris Eleanor
Wyness, Mrs. Ada
Yaw, Maung
Yerbury, Miss J.
Young, Dr. M. Y.
Zahur-ul-Husain, Muhammad

Indian Names and Titles.

There is a bewildering multiplicity of Indian titles, made all the more difficult inasmuch as there is a difference of nomenclature between the titles of Hindus and Mahomedans. Some titles are hereditary and represent ruling chiefs or those nominally such (and of these there are no less than some 620, whilst of the titles themselves some 200 are known); others are personal honours conferred on individuals by the Indian Government, and even then sometimes made hereditary. Yet again, there are numerous complimentary titles, or specifications of office, expressed in Hindu phrases, of which we have occasionally supplied the interpretations. It must be added that though *caste* is often figuring in the names it has nothing whatever to do with the titles. Amir, Khan, Mir, Sultan, Sri, &c., are confusingly used as both titles and names.

The order of rank is thus given by Sir R. Lethbridge in "The Golden Book of India."

Hindu—Maharaja Bahadur, Maharaja, Raja Bahadur, Raja, Rai Bahadur, Rai Saheb, Rai.

Mohammedan—Nizam, Nawab Bahadur, Nawab, Khan Bahadur, Khan Saheb, Khan.

Parsis and Bene-Israelites—Khan Bahadur, Khan Saheb.

Afsur—a corruption of the English "officer."

Ahluwalia—name of a princely family resident at the village of Ahlu, near Lahore.

Akhundzada—son of a Head Officer.

Alijah (Sindhi)—of exalted rank.

Ali Raja—Sea King (Laccadives).

Amir (corruptly *Emir*)—a Mohammedan Chief often also a personal name.

Asaf—a Minister.

Baba—lit. "father;" a respectful "Mr." Irish "Your Honour."

Babu—strictly a 5th or still younger son of a Raja, but often used of any son younger than the heir, whilst it has also grown into a term of address=Esquire. There are, however, one or two Rajas whose sons are known respectively as—1st, Kunwar; 2nd, Diwan; 3rd, Thakur; 4th, Lal; 5th, Babu.

Bahadur—lit. "brave" or "warrior:" a title used by both Hindus and Mohammedans, often bestowed by Government; added to other titles it increases their honour, but alone it designates an inferior ruler.

Bakhshi—a revenue officer or magistrate.

Begum or *Begam*—the feminine of "Nawab" combined in Bhopal as "Nawab Begum."

Besar—apparently a large land-owner.

Bhonsle—name of a Maratha dynasty.

Bhup—title of the ruler of Cooch Behar.

Bhugti—name of a Baluch tribe.

Chhatrapati—one of sufficient dignity to have an umbrella carried over him.

Dada—lit. "grandfather" (paternal); any venerable person.

Daula and *Daulat*—State, also one in office.

Deb—a Brahminical priestly title; taken from the name of a divinity.

Dhiraj—"Lord of the Lands:" added to "Raja," &c., it means "paramount."

Diwan—a Vizier or other First Minister to a native Chief, either Hindu or Mohammedan, and equal in rank with "Sardar," under which see other equivalents. The term is also used of a Council of State.

Elaya Raja—title given to the heir of the Maharaja of Travancore.

Farzand (with defining words added)—"favorite" or "beloved."

Fateh—"victory."

Fath Jeang—"Victorious in Battle" (a title of the Nizam).

Gaekwar (sometimes *Guicowar*)—title with "Maharaja" added of the ruler of Baroda. It was once a caste name and means "cowherd, *i.e.*, the protector of the sacred animal; but later on, in common with "Holkar" and "Sindhia," it came to be a dynastic appellation and consequently regarded as a title. Thus, a Prince becomes "Gaekwar" on succeeding to the estate of Baroda; "Holkar," to that of Indore and "Sindhia," to that of Gwalior.

Hafiz—guardian.

Haji—one who has made pilgrimage to Mecca.

Hiera Lal—"diamond ruby."

Holkar—see "Gaekwar."

Jah—a term denoting dignity.

Jam (Sindhi or Baluch)—Chief.

Kazi—(better written *Qazi*)—a Mohammedan magistrate.

Khan—originally the ruler of a small Mohammedan State, now a nearly empty title though prized. It is very frequently used as a name, especially by Afghans and Pathans.

Khwaja—a Persian word for "master," sometimes a name.

Kunwar or *Kumar*—the heir of a Raja.

Lal—a younger son of a Raja (strictly a 4th son, but see under "Babu").

Lokendra or *Lokindra*—"Protector of the World," title of the Chiefs of Dholpur and Dattia.

Mahant—a feudal title borne by the heads of a Hindu religious body.

Maharaja—the highest of hereditary rulers among the Hindus, or else a personal distinction conferred by Government. It has several variations as under "Raja," with the addition of *Maharaj Rana*; its feminine is *Maharani* (*maha*=great).

Malik—master, proprietor.

Mian—title of the son of a Rajput Nawab resembling the Scottish "Master."

Mir—a leader, an inferior title which, like "Khan," has grown into a name, especially used by descendants of the Chiefs of Sind.

Mirza—if prefixed, "Mr." or "Esquire."

Mong, Moung, or *Maung* (Arakanese)—leader.

Moulvi or *Maulvi*—a learned man or teacher.

Mudaliyar or *Mud-liar*—a personal proper name, but implying "steward of the lands."

Mumtaz-ud-Daula—distinguished in the State *Mulk,* in the country).

Munshi—president, or presiding official.

Myowun—"Mr."

Nawab—originally a Viceroy under the Moghal Government, now the regular leading title of a Mohammedan Prince, corresponding to "Maharaja" of the Hindus.

Nazim—a ruler (not to be confused with following).

Nizam—the title of the ruler of Hyderabad, the one Mohammedan Prince superior to Nawab.

Nono (Thibetan)—the ruler of Spitta.

Pandi or Pundi—a learned man.

Peshkup—manager or agent.

Prince—term used in English courtesy for "Shahzada," but specially conferred in the case of "Prince of Arcot" (called also "Armin-i-Arcot").

Raja—a Hindu Prince of exalted rank, but inferior to "Maharaja." The feminine is *Rani* (Princess or Queen), and it has the variations *Raj, Rana, Rao, Rai, Rawal, Rawat, Raikwar, Raikbar,* and *Raikat.* The form *Rai* is common in Bengal, *Rao* in S. & W. India.

Raj Rajeshwar— King of Kings.

Risaldar—commander of a troop of horses.

Saheb—the Native Hindu term used to or of a European ("Mr. Smith" would be mentioned as "Smith Saheb," and his wife "Smith Mem-Saheb," but in *addressing* it would be "Saheb," fem. "Saheba," without the name); occasionally appended to a title in the same way as "Bahadur," but inferior (=master). The unusual combination "Nawab Saheb" implies a mixed population of Hindus and Mohammedans.

Sahibzada—son of a person of consequence.

Said, Sayid, Saiyid, Sidi, Syed, Syud—various forms for a title adopted by those who claim direct male descent from Mohammed's grandson Husain.

Sardar (corrupted to *Sirdar*)—a leading Government official, either civil or military, even a Grand Vizier. Nearly all the Punjab Barons bear this title. It and "Diwan" are like in value and used by both Hindus and Mohammedans. So, but Mohammedans only, are "Wali," "Sultan," "Amir," "Mir," "Mirza," "Mian," and "Khan."

Sawai—a Hindu title implying a slight distinction (lit. one-fourth better than others).

Sawbwa (Burmese)—a Chief.

Shahzada—son of a King.

Shaikh or *Sheikh* (Arabic)—a Chief.

Shams-ul-Ulama—a Mohammedan title denoting "learned."

Shamshir-Jang—"Sword of Battle" (a title of the Maharaja of Travancore).

Sidi—a variation of "Said."

Sindhia—see under "Gaekwar."

Sri or *Shri*—lit. fortune, beauty: a Sanscrit term used by Hindus in speaking of a person much respected (never addressed *to* him; nearly="Esquire"); used also of divinities. The two forms of spelling are occasioned by the intermediate sound of the *s* (that of *s* in the German *Stadt*).

Subadar—Governor of a province.

Sultan—like "Sardar."

Syed, Syud—more variations of "Said."

Talukdar—an Oudh landlord.

Talpur—the name of a dynasty in Sind.

Thakur—a Hindu term equivalent to "Bahadur," whether as affix or alone.

Tumandar—a Persian word denoting some office.

Umara—term implying the Nobles collectively

Wali—like "Sardar." The Governor of Khelat is so termed, whilst the Chiefs of Cabul are both "Wali" and "Mir."

Zemindar or *Zamindar*—a landowner; orig. a Mohammedan collector of revenue.

Distinctive Badges.—An announcement was made at the Coronation Durbar in 1911, that a distinctive badge should be granted to present holders and future recipients of the titles of 'Diwan Bahadur', 'Sardar Bahadur', 'Khan Bahadur', 'Rai Bahadur', 'Rao Bahadur', 'Khan Sahib', Rai Sahib' and 'Rao Sahib'. Subsequently the following regulations in respect of these decorations were issued:—(1) The decoration to be worn by the holders of the titles above mentioned shall be a badge or medallion bearing the King's effigy crowned and the name of the title, both to be executed on a plaque or shield surrounded by a five-pointed star surmounted by the Imperial Crown, the plaque or shield being of silver gilt for the titles of Diwan, Sardar, Khan, Rai and Rao Bahadur, and of silver for the titles of Khan, Rai, and Rao Sahib. (2) The badge shall be worn suspended round the neck by a ribbon of one inch and a half in width, which for the titles of Diwan and Sardar Bahadur shall be light blue with a dark blue border, for the titles of Khan, Rai and Rao Bahadur light red with a dark red border, and for the titles of Khan, Rai and Rao Sahib dark blue with light blue border.

A Press Note issued in November, 1914, states:—The Government of India have recently had under consideration the question of the position in which **miniatures** of Indian titles should be worn, and have decided that they should be worn on the left breast fastened by a brooch, and not suspended round the neck by a ribbon as prescribed in the case of the Badge itself. When the miniatures are worn in conjunction with other decorations, they should be placed immediately after the Kaiser-i-Hind Medal.

Indian Distinguished Service Medal.—This medal was instituted on June 28th, 1907, by an Army Order published in Simla as a reward for both commissioned and non-commissioned officers of the regular and other forces in India. It bears on the obverse the bust of King Edward VII, and on the reverse a laurel wreath encircling the words For Distinguished Service. The

medal, 1⅜ inches in diameter, is ordered to be worn immediately to the right of all war medals suspended by a red ribbon 1¾ in. wide, with blue edges ¾ in. wide. This medal may be conferred by the Viceroy of India.

Indian Order of Merit.—This reward of valour was instituted by the H. E. I. Co. in 1837, to reward personal bravery without any reference to length of service or good conduct. It is divided into three classes and is awarded to native officers and men for distinguished conduct in the field. On the advancement from one class to another the star is surrendered to the Government, and the superior class substituted, but in the event of the death of the recipient his relatives retain the decoration. The order carries with it an increase of one-third in the pay of the recipient, and in the event of his death the allowance is continued to his widow for three years. The First Class consists of a star of eight points, 1⅝ in. in diameter, having in the centre a ground of dark blue enamel bearing crossed swords in gold, within a gold circle, and the inscription Reward of Valour, the whole being surmounted by two wreaths of laurel in gold. The Second Class star is of silver, with the wreaths of laurel in gold; and the Third Class entirely of silver The decoration is suspended from a simple loop and bar from a dark-blue ribbon 1¼ in. in width with red edges, bearing a gold or silver buckle according to class.

Order of British India.—This order was instituted at the same time as the Order of Merit, to reward native commissioned officers for long and faithful service in the Indian Army. Since 1878, however, any person European or native, holding a commission in a native regiment, became eligible for admission to the Order without reference to creed or colour The First Class consists of a gold eight-pointed radiated star 1¼ in. in diameter. The centre is occupied by a lion statant gardant upon a ground of light-blue enamel, within a dark-blue band inscribed Order of British India, and encircled by two laurel wreaths of gold. A gold loop and ring are attached to the crown for suspension from a broad ornamental band $\frac{5}{16}$ in. in diameter, through which the ribbon, once blue, now red, is passed for suspension from the neck. The Second Class is $1\frac{7}{16}$ in. in diameter with dark-blue enamelled centre: there is no crown on this class, and the suspender is formed of an ornamental gold loop. The reverse is plain in both classes. The First Class carries with it the title Sirdar Bahadur, and an additional allowance of two rupees a day: and the Second the title of Bahadur, and an extra allowance of one rupee per day.

Indian Meritorious Service Medal.—This was instituted on July 27th, 1888, and on receipt of the medal the order states "a non-commissioned officer must surrender his Long Service and Good Conduct medal": but on being promoted to a commission he may retain the M. S. medal, but the annuity attached to it will cease. On the obverse is the diademed bust of Queen Victoria facing left, with a veil falling over the crown behind, encircled by the legend Victoria Kaisar-i-Hind. On the reverse is a wreath of lotus leaves enclosing a wreath of palm tied at the base, having a star beneath; between the two wreaths is the inscription for meritorious service. Within the palm wreath is the word India. The medal, 1⅜ in. in diameter, is suspended from a scroll by means of a red ribbon 1¼ in. wide. The medals issued during the reigns of Queen Victoria's successors bear on the obverse their bust in profile with the legend altered to EDWARDVS or GEORGIVS.

Laws and the Administration of Justice.

The indigenous law of India is personal and divisible with reference to the two great classes of the population, Hindu and Mahomedan. Both systems claim divine origin and are inextricably interwoven with religion, and each exists in combination with a law based on custom. At first the tendency of the English was to make their law public and territorial, and on the establishment of the Supreme Court at Calcutta in 1773 and the advent of English lawyers as judges, they proceeded to apply it to Europeans and Indians alike. This error was rectified by the Declaratory Act of 1780, by which Parliament declared that as against a Hindu the Hindu law and usage, and as against a Mahomedan the laws and customs of Islam should be applied. The rules of the Shastras and the Koran have been in some cases altered and relaxed. Instances can be found in the Bengal Sati Regulation Act of 1829; the Indian Slavery Act, 1843; the Caste Disabilities Removal Act of 1850; the Hindu Widows' Remarriage Act, 1856; and other Acts and Codes. To quote the Imperial Gazetteer, "A certain number of the older English statutes and the English common law are to a limited extent still in force in the Presidency Towns as applicable to Europeans, while much of the old Hindu and Mahomedan law is everywhere personal to their native fellow subjects; but apart from these, and from the customary law, which is as far as possible recognised by the Courts, the law of British India is the creation of statutory enactments made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated."

Codification.

Before the transfer of India to the Crown the law was in a state of great confusion. Sir Henry Cunningham described it as "hopelessly unwieldy, entangled and confusing." The first steps toward general codification were taken in 1833, when a Commission was appointed, of which Lord Macaulay was the moving spirit, to prepare a penal code. Twenty-two years elapsed before it became law, during which period it underwent revision from his successors in the Law Membership, and especially by Sir Barnes Peacock, the last Chief Justice of the Supreme Court of Calcutta. The Penal Code, which became law in 1860, was followed in 1861 by a Code of Criminal Procedure. Substantially the whole criminal law of British India is contained in these two Codes. One of the most eminent lawyers who ever came to India, Sir James Stephen, said "The Indian penal code may be described as the criminal law of England freed from all technicalities and superfluities, systematically arranged and modified in some few particulars (they are surprisingly few) to suit the circumstances of British India. It is practically impossible to misunderstand the code." The rules of Civil Procedure have been embodied in the Code of Civil Procedure. The Indian Penal Code has from time to time been amended. The Code of Civil Procedure was remodelled in 1908 and the Code of Criminal Procedure in 1898. These Codes are now in force.

Statute Law Revision.

In October, 1921, a committee was appointed under the presidency of the Hon. Mr. A. P. Muddiman, I.C.S., to deal with the question of statute law revision. The functions of the Committee are to prepare for the consideration of Government such measures of consolidation and clarification, as may be necessary to secure the highest attaintable standard of formal perfection in the statute law of India. In several branches of the law consolidation has long been overdue, and it is suggested that the preparation of a Bill consolidating the existing law relating to merchant shipping, with such amendments therein as are necessitated or rendered desirable by the enactment of the English statutes since 1894 on the same subject should form the first duty undertaken by the Committee. Under the conditions resulting from the establishment of the reformed Constitution, increasing importance will attach hereafter to the periodical examination and revision of the Statute Book and the Government of India hope that the Committee will take its place as a permanent feature of the legislative machinery of the country.

European British Subjects.

Whilst the substantive criminal law is the same for all classes, certain distinctions of procedure have always been maintained in regard to criminal charges against European British subjects. Until 1872 European British subjects could only be tried or punished by one of the High Courts. It was then enacted that European British subjects should be liable to be tried for any offences by magistrates of the highest class, who were also justices of the peace, and by judges of the Sessions Courts; but it was necessary in both cases that the magistrate or judge should himself be a European British subject. In 1883 the Government of India announced that they had decided "to settle the question of jurisdiction over European subjects in such a way as to remove from the code at once and completely every judicial disqualification which is based merely on race distinctions." This decision, embodied in the Ilbert Bill, aroused a storm of indignation which is still remembered. The controversy ended in a compromise which is thus summarised by Sir John Strachey ("India"). "The controversy ended with the virtual, though not avowed, abandonment of the measure proposed by the Government. Act III of 1884, by which the law previously in force was amended, cannot be said to have diminished the privileges of European British subjects charged with offences, and it left their position as exceptional as before. The general disqualification of native judges and magistrates remains; but if a native of India be appointed to the post of district magistrate or sessions judge, his powers in regard to jurisdiction over European British subjects are the same as those of an Englishman holding the same office. This provision however is subject to the condition that every European British subject brought for trial before the district magistrate or sessions judge has the right, however trivial be the charge, to claim to be tried by a jury of which

not less than half the number shall be Europeans or Americans.....Whilst this change was made in the powers of district magistrates, the law in regard to other magistrates remained unaltered." Since 1836 no distinctions of race have been recognised in the civil courts throughout India.

After a dicussion on this subject in the Legislative Assembly in September 1921, the following motion was adopted:—That in order to remove all racial distinctions between Indians and Europeans in the matter of their trial and punishment for offences, a committee be appointed to consider what amendments should be made in the provisions of the Code of Criminal Procedure, 1898, which differentiate between Indians and European British subjects and American and Europeans who are not British subjects in criminal trials and proceedings and to report on the best methods of giving effect to their proposals."

High Courts.

The highest legal tribunals in India are the High Courts of Judicature. These were constituted by the Indian High Courts Act of 1861 for Bengal, Bombay and Madras, and later for the United Provinces and the Punjab superseding the old supreme and Sudder Courts. The Judges are appointed by the Crown; they hold office during the pleasure of the Sovereign; at least one-third of their number are barristers, one-third are recruited from the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. Trial by jury is the rule in original criminal cases before the High Courts, but juries are never employed in civil suits in India.

For other parts of India High Courts have been formed under other names, the chief difference being that they derive their authority from the Government of India, not from Parliament. In Burma there is a Chief Court, with three or more judges; in the other provinces the chief appellate authority is an officer called the Judicial Commissioner. In Sind the Judicial Commissioner is termed Judge of the Sudder Court and has two colleagues.

The High Courts are the Courts of appeal from the superior courts in the districts, criminal and civil, and their decisions are final, except in cases in which an appeal lies to His Majesty in Council and is heard by the Judicial Committee of the Privy Council in England. The High Courts exercise supervision over all the subordinate courts. Returns are regularly sent to them at short intervals and the High Courts are able, by examining the returns, by sending for proceedings, and by calling for explanations, as well as from the cases that come before them in appeal, to keep themselves to some extent acquainted with the manner in which the courts generally are discharging their duties.

Lower Courts.

The Code of Criminal Procedure provides for the constitution of inferior criminal courts styled courts of session and courts of magistrates. Every province, outside the Presidency towns, is divided into sessions divisions, consisting of one or more districts, and every sessions division has a court of session and a sessions judge, with assistance if need be. These stationary sessions courts take the place of the English Assizes, and are competent to try all accused persons duly committed, and to inflict any punishment authorised by law, but sentences of death are subject to confirmation by the highest court of criminal appeal in the province. Magistrates' courts are of three classes with descending powers. Provision is made and largely utilised in the towns, for the appointment of honorary magistrates; in the Presidency towns Presidency magistrates deal with magisterial cases and benches of Justices of the Peace or honorary magistrates dispose of the less important cases.

Trials before courts of session are either with assessors or juries. Assessors assist, but do not bind the judge by their opinions; on juries the opinion of the majority prevails if accepted by the presiding Judge. The Indian law allows considerable latitude of appeal. The prerogative of mercy is exercised by the Governor-General-in-Council and the Local Government concerned without prejudice to the superior power of the Crown.

The constitution and jurisdiction of the inferior civil courts varies. Broadly speaking, one district and sessions judge is appointed for each district: as District Judge he presides in its principal civil court of original jurisdiction; his functions as Sessions Judge have been described. For these posts members of the Indian Civil Service are mainly selected though some appointments are made from the Provincial Service. Next come the Subordinate Judges and Munsiffs, the extent of whose original jurisdiction varies in different parts of India. The civil courts, below the grade of District Judge, are almost invariably presided over by Indians. There are in addition a number of Courts of Small Causes, with jurisdiction to try money suits up to Rs. 500. In the Presidency Towns, where the Chartered High Courts have original jurisdiction, Small Cause Courts dispose of money suits up to Rs. 2,000. As Insolvency Courts the chartered High Courts of Calcutta, Bombay and Madras have jurisdiction in the Presidency towns. In the mofussil similar powers were conferred on the District Courts by the Insolvency Act of 1906.

Coroners are appointed only for the Presidency Towns of Calcutta and Bombay. Elsewhere their duties are discharged by the ordinary staff of magistrates and police officers unaided by jurors.

Legal Practitioners.

Legal practitioners in India are divided into Barristers-at-Law, Advocates of the High Court, Vakils and Attorneys (Solicitors) of High Courts, and Pleaders, Mukhtiars and revenue agents. Barristers and Advocates are admitted by each High Court to practise in it and its subordinate courts; and they alone are admitted to practise on the original side of some of the chartered High Courts. Vakils are persons duly qualified who are admitted to practise on the appellate side of the chartered High Courts and in the Courts subordinate to the High Courts. Attorneys are required to qualify before admission to practise in much the same way as in England. The rule that a solicitor must instruct counse

prevails only on the original side of certain of the High Courts. Pleaders practise in the subordinate courts in accordance with rules framed by the High Courts.

Organisation of the Bar.

At Calcutta, Madras, and Bombay there is a Bar Committee presided over, *ex officio*, by the Advocate-General. This body is elected by the barristers practising in each High Court, and its functions are to watch the interests of the Bar and to regulate its etiquette. At Allahabad, Lahore, Nagpore, and Rangoon a similar Bar Committee exists, but the electorate is extended to include the vakils or native pleaders, and the president is either the senior practising member of the Bar or the Government Advocate. In the larger Districts and Sessions Courts, an organisation representing the Bar is usually to be found, and in the subordinate Courts, including the Revenue Courts, similar machinery is generally in use. Pending an opportunity of detailed inquiries in India, these general descriptions must suffice.

Composition of the Bar.

A considerable change is occurring in the composition of the Indian Bar. The following extract from an informing article in the *Times* (May 25, 1914) indicates the character and incidence of this development "During the last forty years, a striking change has taken place in the professional class. The bulk of practice has largely passed from British to Indian hands, while, at the same time, the profession has grown to an enormous extent. One typical illustration may be quoted. Attached to the Bombay High Court in 1871 there were 38 solicitors, of whom 10 were Indian and 28 English, and 24 advocates, of whom 7 were Indian and 17 English. In 1911, attached to the same High Court, there were 150 solicitors, of whom more than 130 were Indian and the remainder English, and 250 advocates, of whom 16 only were English and the remainder Indian."

Law Officers.

The Government of India has its own law colleague in the Legal Member of Council. All Government measures are drafted in this department. Outside the Council the principal law officer of the Government of India is the Advocate-General of Bengal, who is appointed by the Crown, is the leader of the local Bar, and is always nominated a member of the Provincial Legislative Council. In Calcutta he is assisted by the Standing Counsel and the Government Solicitor. There are Advocates-General and Government Solicitors for Bombay and Madras, and in Bombay there is attached to the Secretariat a Legal Remembrancer and an Assistant Legal Remembrancer, drawn from the Judicial Branch of the Indian Civil Service. The Government of Bengal consults the Bengal Advocate-General, the Standing Counsel and the Government Solicitor, and has besides a Legal Remembrancer (a Civil Servant) and a Deputy Legal Remembrancer (a practising barrister); the United Provinces are equipped with a civilian Legal Remembrancer and professional lawyers as Government Advocate and Assistant Government Advocate; the Punjab has a Legal Remembrancer, Government Advocate and a Junior Government Advocate; and Burma a Government Advocate, besides a Secretary to the Local Legislative Council.

Sheriffs are attached to the High Courts of Calcutta, Madras and Bombay. They are appointed by Government, selected from non-officials of standing, the detailed work being done by deputy sheriffs, who are officers of the Court.

Law Reports.

The Indian Law Reports are published in four series—Calcutta, Madras, Bombay, and Allahabad, under the authority of the Governor-General in Council. They contain cases determined by the High Court and by the Judicial Committee on appeal from the particular High Court. These appeals raise questions of very great importance, and the Council of Law Reporting for England and Wales show their appreciation by printing the Indian Appeals in a separate volume, and have also compiled a digest of Indian Appeals covering the period 1874-1893. The other Provinces and States have series of reports issued under the authority either of the Judiciary or the State.

Legislative Power.

The supreme power of Parliament to legislate for the whole of India cannot be questioned. In practice, however, this power is little used, there being a majority of officials on the Imperial Legislative Council—a majority deliberately reserved in the India Councils Act of 1909—the Secretary of State is able to impose his will on the Government of India and to secure the passage of any measure he may frame, regardless of the opinion of the Indian authorities. Legislative Councils have been established both for the whole of India and for the principal provinces. Their constitution and functions are fully described in detailing the powers of the Imperial and Provincial Councils (q. v.). To meet emergencies the Governor-General is vested with the power of issuing ordinances, having the same force as Acts of the Legislature, but they can remain in force for only six months. The power is very little used. The Governor-General-in-Council is also empowered to make regulations, having all the cogency of Acts, for the more backward parts of the country, the object being to bar the operation of the general law and permit the application of certain enactments only.

Bengal Judicial Department.

Sanderson, The Hon'ble Sir Lancelot	Chief Justice.
Teunon, The Hon'ble Mr. William, I.C.S.	Puisne Judge.
Woodroffe, The Hon'ble Sir John George, M.A., Bar.-at-Law.	Ditto.
Mukharji, The Hon'ble Sir Ashutosh, Kt., C.S.I., M.A., D.L.	Ditto.
Richardson, The Hon'ble Mr. Thomas William, I.C.S., Bar.-at-Law.	Ditto.

Bengal Judicial Department—*contd.*

Walmsley, The Hon'ble Mr. Hugh, I.C.S.	Puisne Judge.
Rankin, The Hon Mr. George Claus, Bar-at-Law ..	Ditto.
Greaves, The Hon'ble Mr. William Ewart	Ditto.
Chatarji, The Hon'ble Sir Nalini Ranjan, M.A., B.L. ..	Ditto.
Newbould, The Hon'ble Mr. B. B.	Ditto.
Beachcroft, The Hon'ble Mr. Charles Porten, I.C.S. ..	Ditto.
Ghosh, The Hon. Mr. Charu Chander, Bar.-at-Law ..	Ditto.
Buckland, The Hon. Mr. Justice Pullip Lindsay, Bar.-at-Law.	Ditto.
Pearson, The Hon. Mr. Justice Herbert Grayhurst, Bar.-at-Law.	Ditto. (Additional.)
Suhrawardy, The Hon. Mr Justice Zahhadur Rahim Zahid, Bar.-at-Law.	Ditto (do.)
Cunning, The Hon. Mr. Justice Arthur Herbert, I.C.S.	Ditto. (Acting).
Panton, The Hon. Mr. Justice Edward Brookes Henderson.	Ditto. (do.)
Gibbons, The Hon'ble Mr. Thomas Clarke Pilling, K.C.	Advocate-General.
Mitra, B. L., Bar.-at-Law	Standing Counsel.
Kesteven, The Hon'ble Mr. Charles Henry	Government Solicitor.
Duval, The Hon. Mr. H. P., I.C.S.	Superintendent and Remembrancer of Legal Affairs.
Orr, John Williams, Bar.-at-Law..	Deputy Superintendent and Remembrancer of Legal Affairs.
Ram Charan Mitra	Senior Government Pleader.
Sadhu, Rai Bahadur Tarak Nath	Public Prosecutor, Calcutta.
Hechle James, Herbert	Registrar, Keeper of Records, Taxing Officer, Accountant-General, and Sealer, etc., Original Jurisdiction.
Remfry, Maurice	Registrar in Insolvency, Original Side.
Nalini Mohan Chatarji, Bar.-at-Law	Master and Official Referee.
Ryper, George	Dy. Registrar.
Moses, O., Bar.-at-Law	Clerk of the Crown for Criminal Sessions.
Kirkham, Joseph Alfred	Secretary to the Chief Justice and Head Clerk, Decree Department.
Edgley, Norman George Armstrong, I.C.S.	Registrar and Taxing Officer, Appellate Jurisdiction
Counsell, Frank Bertram	Deputy Registrar.
Paulit, Peter Sydenham	Assistant Registrar.
Kinney, Alexander	Administrator-General and Officia Trustee.
Bonnerjee, K. K. Shelly, Bar.-at-Law	Official Receiver, sub. *pro tem.*
Dobbin, F. K., Bar.-at-Law	Coroner of Calcutta.
Falkner, George McDonald	Official Assignee.
Bose, B.D., Bar.-at-Law	Editor of Law Reports.

Bombay Judicial Department.

Macleod, The Hon. Sir Norman Cranstoun, Bar-at-Law.	Chief Justice.
Shah, The Hon'ble Sir Lallubhai Asharam, M.A., LL.B.	Puisne Judge.
Marten, The Hon. Mr. A. B.	Ditto. (On furlough).
Pratt, The Hon. Mr. Edward Millard, I.C.S.	Ditto.
Crump, The Hon'ble Mr. Louis Charles, I.C.S.	Ditto. (On furlough).
Fawcett, The Hon'ble Mr Charles Gordon Hill, I.C.S.	Ditto
Abdeali Muhammadali Kaziji, The Hon. Mr.	Ditto.
Kemp, The Hon. Mr. Norman Wright, Bar.-at-Law ..	Ditto.
Kincaid, The Hon. Mr. Charles Augustus	Ditto.
Strangman, The Hon'ble Sir T. J.	Advocate-General.
Wild, Arthur Clement, B.A., I.C.S.	Remembrancer of Legal Affairs.
Norman, Douglas Reay, B.A., I.C.S.	Assistant Remembrancer of Legal Affairs.
Bowen, J. C. G.	Government Solicitor and Public Prosecutor.
Campbell, Henry	Clerk of the Crown.
Kemp, K. Mac I., Bar.-at-Law	Reporter to the High Court.
Mitchell, H. C. B..	Administrator-General and Official Trustee.
Phirozshah Behramji Malbari, Bar.-at-Law	Prothonotary, Testamentary and Admiralty Registrar.
Hirjibhai Hormasji Wadia, M.A.	Master and Registrar in Equity and Commissioner for taking Accounts and Local Investigations, and Taxing Officer.
Currimbhoy, Mr. Mahomedbhai	Sheriff.
Arthur Fasken Kindersley, B.A., I.C.S.	Registrar, Appellate Side.

Bombay Judicial Department—*contd.*

Nasarwanji Dinshahji Gharda, B.A., LL.B.	Deputy Registrar and Sealer, Appellate Side.
King, A. R.	Sub. *pro tem.* Coroner.

COURT OF THE JUDICIAL COMMISSIONER OF SIND.

Kincaid, The Hon. Mr. Charles Augustus, C.V.O., I.C.S.	Judicial Commissioner (Acting High Court Judge.)
Calcraft-Kennedy, B.C.H., I.C.S.	Additional Judicial Commissioner (Acting Judicial Commissioner).
Madgaonkar, Govind Dinanath, B.A., I.C.S.	Addl. Judicial Commissioner (Ag.)
Kemp, Norman Wright	Ditto. (Acting High Court Judge).
Raymond, Edward	Ditto.
Aston, Arthur Henry Southcote, M.A., Bar-at-Law ..	Ditto. (Acting).

Madras Judicial Department.

Schwabe, Sir Walter	Chief Justice.
Oldfield, The Hon'ble Mr. Francis Du Pre, I.C.S. ..	Puisne Judge.
Spencer, The Hon'ble Mr. Charles Gordon, I.C.S. ..	Ditto.
Trotter, The Hon'ble Mr. Victor Murray Coults ..	Ditto.
Ayling, The Hon'ble Sir William Bock, I.C.S.	Ditto.
Ramesam Pantulu, The Hon. Mr. V.	Ditto.
Odgers, The Hon. Mr. Charles Edwin, M.A., B.C.L ..	Ditto.
Phillips, The Hon. Mr. William Watkin, I.C.S. ..	Ditto.
Kumarswami Shastri, The Hon'ble Diwan Bahadur C. V.	Ditto.
Napier, The Hon. Mr. Charles Frederick	Ditto.
Krishnan, The Hon. C. Dewan Bahadur, M.A., Bar-at-Law	Ditto.
Ramaswami Ayyar, C.P., B.A., B.L.	Advocate-General.
Brightwell, Henry	Government Solicitor.
Madhavan Nair, C., Bar.-at-Law	Government Pleader.
Adam, J. C., Bar-at-Law	Public Prosecutor.
Tirunarayana Achariyar, M.A.	Senior Law Reporter.
Cornish, H. D., Bar.-at-Law	Administrator-General and Official Trustee.
Butler, Frank Gregory, I.C.S.	Registrar.
Sydney-Smith, Carleton, Bar.-at-Law	Crown Prosecutor.

Assam Judicial Department.

Mellor, Arthur	Secretary to Government, Legislative Department, and Secretary to the Assam Legislative Council. Superintendent and Remembrancer of Legal Affairs.
Stinton, Selby Edwin	District and Sessions Judge, Assam Valley Division.
Jack, Robert Ernest	District and Sessions Judge, Sylhet and Cachar.
Martin, Olans MacLeod	Offg. Additional Judge, Assam Valley District.
Banarji, Shashi Bhusan	Additional District and Sessions Judge, Sylhet and Cachar.

Bihar and Orissa Judicial Department.

Miller, The Hon Sir Thomas Frederick Dawson ..	Chief Justice (On furlough).
Jwala Prashad, The Hon'ble Mr.	Officiating Chief Justice.
Adami, The Hon. Justice Leonard Christian, I.C.S. ..	Puisne Judge.
Coutts, The Hon. Mr. William Strachan	Ditto.
Prafulla Ranjan Dass, The Hon. Mr., Bar.-at-Law ..	Ditto.
Mullick, The Hon'ble Sir Basanta Kumar, I.C.S. ..	Ditto.
Bucknill, The Hon. Justice Sir John Alexander Strachey, Bar.-at-Law.	Ditto.
Ross, The Hon. Mr. Justice Robert Lindsay	Ditto.
Allanson, Harry Llewelyn Lyons, I.C.S.	Superintendent and Remembrancer of Legal Affairs.
Macpherson, Mr. T. S.	Registrar.

Burma Judicial Department.

Robinson, The Hon'ble Mr. Sydney Maddock, Bar.-at-Law.	Chief Judge, Ch ef Court, Lower Bu
Maung Kin	Judge.
Young, The Hon. Mr. Charles Philip Radford, B.A. ..	Do.
Pratt, The Hon. Mr. Justice Henry Sheldon.. ..	Do.
Heald, The Hon. Mr. Justice Benjamin Herbert ..	Do.
Rutledge, The Hon. Mr. Justice John Guy	Do.
Duckworth, The Hon. Mr. Justice Edward Dyce ..	Temporary Additional Judge, Chief Court, Lower Burma.
Saunders, Leslie Harry, I.C.S.	Judicial Commissioner, Upper Burma.
Brown, Harold Arrowsmith, I.C.S., Bar.-at-Law ..	Addl. Judge, Judicial Commissioner's Court, Upper Burma.
deGlanville, Oscar, Bar.-at-Law	Administrator-General, Official Trustee, Official Assignee and Receiver, Rangoon. (Temporary).
Christopher, S. A., Bar.-at-Law	Government Prosecutor, Rangoon.
Barretto, Charles Lionel, Advocate	Ditto. Moulmein.
Aubrey, Charles Beresford	Registrar, Court of Judicial Commissioner, Upper Burma.

Central Provinces Judicial Department.

Drake Brockman, Sir H. V., M.A., LL.M., Bar.-at-Law, I.C.S.	Judicial Commissioner.
Batten, J. K., I.C.S.	Additional Judicial Commissioner
Hallifax, H. F., I.C.S.	Do. do. (Officiating).
Kotwal, P. S., Bar.-at-Law	Do. (do.)
Prideaux, Frank Winckworth Austin, O.B.E.	Do. do. (do.)
Dhoble, Rao Bahadur Wasudeo Ramchandra, B.A., B.L.	Do. do. (Temporary).
Alai Raza, Saiyid, Bar.-at-Law	Registrar.
Muhammad Abdul Hadi, Khan Saheb	Deputy Registrar.

N.-W. Frontier Province Judicial Department.

Rennie, F. P., I.C.S.	Judicial Commissioner.
Muhammad Safdar Khan..	Registrar.

Punjab Judicial Department.

The Hon'ble Sir Rai Bahadur Shadi Lal, Bar.-at Law.	Chief Judge.
Smith, The Hon'ble Mr. H. Scott, I.C.S.	Judge.
Chevis, The Hon'ble Mr. William, I.C.S.	Do.
Abdur Rauf, The Hon. Khan Bahadur Sayyed Muhammad.	Do.
Le Rossignol, The Hon. Mr. Walter Aubin, I.C.S. ..	Do.
Broadway, The Hon. Mr. Alan Brice, Bar.-at-Law ..	Do.
Wilberforce, The Hon. Mr. Samuel, B.A., I.C.S. ..	Do.
Martineau, The Hon. Mr. Alfred Edward, I.C.S. ..	Do. (Temporary)
Harrison, The Hon. Mr. Michael Harman	Do. (Officiating.)
Moti Sagar, The Hon. Mr. Rai Sahib	Do. (do.)
Abdul Kadir, The Hon. Mr.	Do. (do.)
Ellis, The Hon. Mr. Thomas Peter, M.A., I.C.S.	Legal Remembrancer.
Herbert, H. A.	Government Advocate.
Gordon-Walker, A. L., Bar.-at-Law	Registrar.
Jai Lal, Rai Bahadur	Assistant Legal Remembrancer and Administrator-General and Official Trustee.

United Provinces Judicial Department.

Mears, The Hon Sir Edward Grimwood, Bar.-at-Law ..	Chief Justice.
Banarji, The Hon'ble Sir Pramada Charan, Kt., B.A., B.L.	Puisne Judge.
Piggott, The Hon'ble Mr. Theodore Caro, I.C.S. ..	Ditto.
Tudball, The Hon'ble Sir William, I.C.S.	Ditto.
Walsh, The Hon. Mr. Cecil, Bar.-at-Law, M.A. ..	Ditto.
Rafiq, The Hon'ble Mr. Muhammad, Bar.-at-Law ..	Ditto.
Lindsay, The Hon. Mr. Benjamin, I.C.S.	Ditto. (Officiating).
Stuart, The Hon. Mr. Louis, C.I.E., I.C.S.	Ditto. (do.)
Ryves, The Hon. Mr. Alfred Edward, B.A., Bar.-at-Law	Ditto. (Addl.) (On combined leave).
Gokul Prasad, The Hon. Mr. Rai Bahadur, M.A., LL.B...	Ditto. (do.) (On privilege leave)
Wallach, The Hon. Mr. William, Bar.-at-Law	Ditto. (Acting.)
Sulaiman, The Hon. Mr. Shah, Bar.-at-Law	Ditto. (do.)
Kanhaiya Lal, The Hon. Mr. Rai Bahadur, Pandit, M.A., LL.B.	Ditto. (do.)
Johnson, J. N. G., I.C.S.	Registrar.
Porter, Wilfred King, Bar.-at-Law	Law Reporter and Secretary, Legislative Council.
Banarji, Lalit Mohan, M.A., LL.B.	Government Advocate.
Shankar Saran, B.A., Bar.-at-Law	Government Pleader.

COURT OF JUDICIAL COMMISSIONER OF OUDH—LUCKNOW.

Daniels, Sidney Reginald, I.C.S., Bar.-at-Law	Judicial Commissioner (Officiating).
Dalal, B.J.	First Additional Judicial Commissioner (Officiating).
Wazir Hasan, Sayid, Bar.-at-Law	Second Additional Judicial Commissioner (Officiating).
Saiyid Iftikhar Husain, B.A.	Registrar.
Nagendra Nath Ghosal, Rai Bahadur, B.A., B.L. ..	Government Pleader.

NUMBER AND VALUE OF CIVIL SUITS INSTITUTED.

Administrations.	Number of Suits Instituted.							Number of Suits the value of which cannot be estimated in money.	Total Number of Suits Instituted.	Total Value of Suits.
	Value not exceeding Rs. 10.	Value Rs. 10 to Rs. 50.	Value Rs. 50 to Rs. 100.	Value Rs. 100 to Rs. 500.	Value Rs. 500 to Rs.1,000.	Value Rs. 1,000 to Rs.5,000.	Value above Rs.5,000.			£
Bengal	104,435	325,117	139,488	142,026	13,169	7,809	1,409	937	734,390	7,504,148
Bihar and Orissa	34,107	74,898	29,556	32,323	4,145	3,209	782	89	179,109	2,942,944
United Provinces	11,207	73,082	48,219	55,252	7,380	6,189	1,362	68	202,759	6,905,749
Punjab	14,313	54,050	43,452	49,580	7,992	4,231	483	307	174,408	2,603,407
Delhi	405	1,840	1,043	1,621	396	491	159	1	5,956	296,855
North-West Frontier Province	3,222	8,848	6,143	6,590	1,024	611	126	16	26,580	432,213
Burma	2,804	16,855	11,965	17,187	2,254	1,789	333	1,273	54,460	1,206,652
Central Provinces and Berar	6,178	36,705	24,236	30,670	4,307	2,850	439	1	105,386	1,758,724
Assam	3,946	19,362	9,883	10,312	881	329	40	126	44,879	368,821
Ajmer-Merwara	1,258	4,545	2,470	1 422	133	69	6	2	9,905	68,541
Coorg	196	1,372	762	529	36	26	2	..	2,923	19,077
Madras	74,993	186,026	80 814	101,726	13,699	9,239	1,568	796	(a) 468,861	6,958,191
Bombay	8,876	48,535	29 826	42,382	7,363	6,169	1,651	2,381	147,183	9,347,624
British Baluchistan	415	1,519	609	780	107	61	15	106	3,612	42,384
TOTAL, 1918	266,355	852,754	428,466	492,400	62,886	43,072	8,375	6,103	2,160,411	40,455,330
1917	296,225	919,308	466,612	517.131	61,140	80.880	7,528	6.549	2,315,373	35.201,455
1916	305,751	935,140	463,294	511,417	60,405	39,680	7,076	6,237	2,329,000	32,502,836
1915	309,505	900,766	431,983	476,916	56,453	37,934	6,763	6,148	2,226,468	31,554,434
1914	286,704	835,694	390,885	438,122	53,845	36,247	6,633	7,030	2,055,160	34,083,673
1913	289,745	851,323	395,546	433,932	51,981	34,066	6,224	7,300	*2,070,117	28,255,410
1912	301,394	867,790	393,502	425,852	50,300	33,037	6,164	7,368	*2,085,407	26,783,601
TOTALS 1911	299,542	858,388	387,657	406,486	47,408	31,563	5,956	6,336	*2,043,336	27,350,585
1910	301,895	879,145	405,969	440,101	56,628	37,732	6,798	6,763	*2,135,031	32,340,338
1909	294,997	845,946	376,742	390,375	48,654	30,806	5,690	7,336	*2,000,546	28,958,056
1908	289,284	819,595	354,196	366,602	44,430	28,236	5,264	7,347	*1,914,954	25,955,219
1907	300,857	808,368	335,739	344.351	40,707	26,186	4,869	6,822	*1,867,899	22,459,065
1906	311,039	818,974	335,840	338,010	39,863	25,014	4,497	6,871	*1,880,108	22,370,186

* Details not given of 42 Bombay suits in 1906; 56 Madras suits in 1906, 96 in 1907, 74 in 1908, 92 in 1909, 376 in 1910, 71 in 1911, 64 in 1912, 22 in 1913, and 28 suits in 1914: 370 Bengal suits in 1909: and 49 Delhi suits in 1913 and 84 in 1914.

(a) Excludes 4 suits before Village Panchayats in 1918, the information as to their value not being available.

THE INDIAN POLICE.

The Indian Government employ 202,792 (in 1918) Officers and men in the Indian Police The total cost of maintaining the Force is Rs. 4,330,890 according to the latest figures available, but this total has been considerably raised in the past year or two on account of increases of pay and allowances made on account of the increased cost of living. In large cities, the Force is concentrated and under direct European control; in the mofussil the men are scattered throughout each District and located at various Outposts and Police Stations. The smallest unit for administrative purposes is the Outpost which generally consists of 3 or 4 Constables under the control of a Head Constable. Outpost Police are maintained to patrol roads and villages and to report all matters of local interest to their superior, the Sub-Inspector. They have no powers to investigate offences and are a survival of the period when the country was in a disturbed state and small bodies of Police were required to keep open communications and afford protection against the raids of dacoits. It is an open question whether they are now of much use. Each Outpost is under a Police Station which is controlled by an officer known as a Sub-Inspector.

Distribution of Police.—The area of a Police Station varies according to local conditions. The latest figures available are: —

—	Average area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
	Square miles.	
Bengal *	126	4·8
Assam	616	5·3
United Provinces	127	7·7
Punjab	203	10 3
North-West Frontier Province	179	19·8
Central Provinces and Berar	242	8·6
Burma *	487	13·4
Madras	144	8·0
Bombay *	252	15·0

* Excluding the towns of Calcutta, Bombay and Rangoon. The figures include the Railway police, but not Military police.

Organisation of Police.

The Police Station Officer (the Sub-Inspector) is responsible for the investigation of all cognisable crimes, that is to say, all offences in which the Police can arrest without a warrant from a Magistrate, which occur within his jurisdiction; he is also held responsible for the maintenance of the public peace and the prevention of crime. From the point of view of the Indian Ryot, he is the most important Police Officer in the District and may rightly be considered the backbone of the Force.

Superior to the Sub-Inspector is the Inspector who holds charge of a Circle containing 4 or 5 Police Stations. His duties are chiefly those of supervision and inspection. He does not ordinarily interfere in the investigation of crime unless the conduct of his subordinates renders this necessary.

The Inspector is usually a selected and experienced Sub-Inspector. Each District contains 3 or 4 Circles, and in the case of large Districts, is divided into 2 Sub-divisions—one of which is given to an Assistant Superintendent of Police, a European gazetted Officer. The Police Force in each District is controlled by a District Superintendent of Police, who is responsible to the District Magistrate (Collector or Deputy Commissioner) for the detection and prevention of crime and for the maintenance of the public peace, and, to his Deputy Inspector-General and Inspector-General, for the internal administration of his Force. Eight or ten Districts form a Range administered by a Deputy Inspector-General, an officer selected from the ranks of the Superintendents. At the head of the Police of each Province is the Inspector-General who is responsible to the Local Government for the administration of the Provincial Police.

Separate but recruited from the District Force is the Criminal Investigation Department, which is under the control of a specially selected European Officer of the rank and

standing of a Deputy Inspector-General. The Criminal Investigation Department, usually called the C. I. D., is mainly concerned with political inquiries, sedition cases and crimes with ramifications over more than one District or which are considered too important to leave in the hands of the District Police. It is a small force of Sub-Inspectors and Inspectors who have shown their ability and intelligence when working in the mofussil and forms in each Province a local Scotland Yard.

The larger Cities of Calcutta, Bombay, and Madras have their own Police Force, independent of the Inspector-General of Police, and under the control of a Commissioner and 2 or more Deputies. For Police purposes each city is divided into divisions; in Calcutta each division is in charge of a Deputy Commissioner of Police; in Bombay and Madras of a Superintendent, these officers being selected from the European ranks of the City Force. In Bombay, however, the Superintendents are Gazetted Officers, and two of them are Indians. Each division is sub-divided into a small number of Police Stations, the station being in charge of an Inspector assisted by a Deputy Inspectors Indian Sub-Inspectors and European Sergeants

The Supreme Government at Delhi and Simla keeps in touch with the Provincial Police by means of the Director of Criminal Intelligence and his Staff. The latter do not interfere in the Local Administration and are mainly concerned with the publication of information regarding international criminals, inter-provincial crime and Political inquiries in which the Supreme Government is interested.

Recruitment.—The constable is enlisted locally. Certain castes are excluded from service and the formation of cliques by filling up the Force from any particular caste or locality is forbidden. In some Provinces a fixed percentage of foreigners must be enlisted. Recruits must produce certificates of good character and pass a medical test. They must be above certain standards of physical development. The constable rises by merit to the rank of Head Constable and, prior to the Police Commission, could rise to the highest Indian subordinate appointments. Since 1906, his chances of promotion have been greatly curtailed; this has certainly lowered the standard coming forward for service in the Force in the lower ranks.

The Sub-Inspector, until 1906, was a selected Head Constable, but Lord Curzon's Commission laid down that Sub-Inspectors should be recruited direct from a socially better class of Indians. In most Provinces, eighty per cent. of the Sub-Inspectors are selected by nomination, trained for a year or 18 months at a Central Police School, and, after examination, appointed direct to Police Stations to learn their work by actual experience. It is too early to judge this system by results, but it has no doubt great disadvantages and undetected crime in India is increasing rapidly.

An Inspector is generally a selected Sub-Inspector. Direct nomination is the exception, not the rule.

The Deputy Superintendent, a new class of officer, instituted on the recommendation of the Commission, is an Indian gazetted officer and is the native Assistant to the District Superintendent of Police. He is either selected by special promotion from the ranks of the Inspectors or is nominated direct, after a course at the Central Police School.

Prior to 1893, the gazetted ranks of the Force were filled either by nomination or by regimental officers seconded from the Army for certain periods. In 1893, this system was abandoned and Assistant Superintendents were recruited by examination in London. On arrival in India, they were placed on probation until they had passed their examinations in the vernacular, in law, and in riding and drill. The establishment of Police Training Schools in 1906 has done much to improve the training of the Police Probationer, and selection by examination has given Government a better educated officer, but open competition does not reveal the best administrators and should be tempered, as in the Navy, by selection.

Internal Administration.—The District Force is divided into 2 Branches—Armed and Unarmed. As the duties of the armed branch consist of guarding Treasuries, escorting treasure and prisoners and operating against dangerous gangs of dacoits, they are maintained and controlled on a military basis. They are armed and drilled and taught to shoot after military methods. The unarmed branch are called upon to collect fines magisterially inflicted, serve summonses and warrants, control traffic, destroy stray dogs, extinguish fires, enquire into accidents and non-cognizable offences. The lower grades are clothed and housed by Government without expense to the individual. The leave rules are fairly liberal, but every officer, European or Native, must serve for 30 years before he is entitled to any pension, unless he can obtain a medical certificate invaliding him from the service. This period of service in an Eastern climate is generally admitted to be too long and the efficiency of the Force would be considerably improved if Government allowed both the officers and men to retire after a shorter period of service.

STATISTICS OF POLICE WORK.

The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very

imperfectly the degree of success with which the police carry out that important branch of their duties, which consists in the prevention of crime. These considerations have been emphasized in recent orders of the Government of India. Subject to these observations, the figures below may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

Administrations	Number of Offences reported.	Number of Persons under Trial.	Persons whose cases were disposed of				Persons remaining under Trial at the end of the Year.
			Discharged or Acquitted.	Convicted.	Committed or Referred.	Died, Escaped or Transferred to another Province.	
Bengal	339,356	(*b*) 294,969	95,353	184,069	3,506	228	11,811
Bihar and Orissa ..	109,714	111,501	57,326	47,406	1,254	198	5,317
United Provinces ..	216,121	319,638	176,305	127,044	7,241	796	8,252
Punjab	171,087	229,579	156,462	56,003	1,421	606	15,087
North-West Frontier Province.	23,435	34,034	16,080	17,194	310	67	383
Burma	106,506	177,221	62,498	100,668	1,611	1,947	10,497
Central Provinces and Berar.	36,109	53,096	27,741	19,292	2,492	159	3,408
Assam	41,962	35,474	18,783	14,156	623	72	1,840
Ajmer-Merwara ..	7,102	10,119	3,339	6,286	30	193	271
Coorg	4,205	4,310	2,477	1,687	....	22	124
Madras	303,942	415,418	182,311	209,732	5,047	355	17,963
Bombay	163,072	(*a*)226,155	83,678	128,591	1,964	1,454	10,459
British Baluchistan ..	7,140	11,878	6,530	3,980	....	126	1,242
Delhi	6,240	6,277	3,245	2,773	18	16	225
TOTAL, 1918 ..	1,536,081	1,929,669	892,131	918,881	25,517	6,239	86,889
1917 ..	1,638,577	2,038,170	943,805	987,148	22,820	4,810	79,572
1916 ..	1,669,070	2,098,379	980,525	10,14,891	23,186	6,139	73,619
1915 ..	1,603,075	2,085,622	982,589	997,210	25,185	4,769	75,851
1914 ..	1,634,224	2,120,472	1,031,374	992,922	23,554	4,949	67,631
1913 ..	1,658,405	*a*2,141,362	1,051,888	987,592	22,459	4,735	74,652
1912 ..	1,659,254	*a*2,132,813	1,053,657	977,267	21,650	4,313	75,765
TOTALS .. 1911 ..	1,502,995	*a*1,960,679	966,783	897,786	21,173	3,906	70,832
1910 ..	1,447,732	*a*1,884,951	922,379	872,298	21,029	4,439	64,677
1909 ..	1,421,350	*a*1,856,219	914,500	854,667	22,174	3,349	61,502
1908 ..	1,412,817	*a*1,814,207	897,462	860,065	24,535	3,625	58,496
1907 ..	1,411,653	1,816,827	880,706	851,097	21,296	3,505	60,223
1906 ..	1,404,777	1,805,707	864,493	860,486	22,776	3,911	54,041

(*a*) Includes 9 persons (9 handed over to Military Authorities) in each of the years 1917 and 1918.

Includes 8 persons (9 handed over to Military Authorities) in 1916.
" 10 " (10 handed over to Military Authorities) in 1915.
" 25 " (9 on dormant file, 16 handed over to Military Authorities) in 1914.
" 30 " (13 " 17 " " to Military Authorities) in 1913.
" 149 " (139 " 9 " " " " " and 1 sent to Naval Authorities) in 1912.
" 203 " (171 " 35 " " to Military Authorities) in 1911.
" 128 " (117 " 11 " " to Military Authorities) in 1910.
" 26 " (10 " 14 " " " " " and 2 referred under Section 307, Criminal Procedure Code) in 1909.

(*b*) Includes 2 persons remanded for retrial in 1918.

PRINCIPAL POLICE OFFENCES

Administrations.	Cases.													
	Offences against the State and Public Tranquility.		Murder.		Other serious Offences against the Person.		Dacoity.		Cattle Theft.		Ordinary Theft.		House-trespass and Housebreaking with intent to commit Offence.	
	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.
Bengal	2,012	848	508	55	5,605	1,350	692	154	776	321	28,232	4,996	47,454	2,329
Calcutta Town and Suburbs.	102	56	11	1	674	177	2	..	18	12	4,780	1,299	1,332	245
Bihar and Orissa ..	933	323	226	48	2,846	620	457	137	937	314	17,447	3,395	21,366	1,202
United Provinces ..	1,612	783	992	283	8,148	2,805	2,047	249	4,653	1,050	35,737	6,412	6,021	4,574
Punjab	1,317	432	581	241	5,595	1,618	76	22	2,278	580	8,769	2,110	7,506	1,828
Delhi	16	7	17	2	123	29	1	..	14	5	468	145	478	73
N.-West Frontier Pro.	168	89	353	155	1,295	572	101	21	106	21	1,401	382	1,927	251
Burma	629	374	670	134	9,772	2,761	261	56	4,376	1,111	16,273	5,710	9,789	3,066
Rangoon	63	12	14	6	358	119	8	..	..	..	1,358	501	317	125
Central Provinces and Berar.	511	207	359	117	2,396	736	169	18	1,148	394	6,093	2,515	6,053	1,504
Assam	617	220	61	21	1,219	316	40	25	300	84	4,564	971	6,113	549
Coorg	5	2	4	1	51	22	2	..	12	8	152	59	71	17
Madras	1,777	613	953	188	5,169	1,222	1,015	89	4,747	1,394	6,587	6,587	7,587	2,778
Bombay	1,060	334	485	160	3,704	1,060	419	75	2,882	819	5,268	5,268	12,094	2,247
Bombay Town & Island.	89	66	27	10	695	342	..	..	..	..	6,219	3,297	1,343	288
TOTAL, 1918 ..	10,934	1,378	5,271	1,427	47,772	13,805	5,296	847	22,294	6,122	194,105	43,070	220,123	21,188
1917.	11,234	4,575	4,856	1,428	50,443	14,354	3,050	506	23,194	6,567	179,427	40,055	209,907	21,239
1916.	11,440	4,651	4,773	1,388	51,459	15,277	3,286	563	26,354	7,516	179,549	41,502	217,295	21,655
1915.	11,698	4,753	1,307	4,757	51,795	15,186	3,730	733	28,382	8,248	188,286	43,572	235,509	22,642
1914.	11,706	4,740	1,484	4,624	52,522	15,324	2,770	457	27,329	7,926	178.824	39,664	216,817	21,296
1913.	12.172	4,798	1,397	4,471	52,948	15,458	2,494	397	27,261	7,495	*174,727	*37,685	205,860	20,014
1912.	12,414	4,716	1,308	4,430	52,337	14,763	2,512	413	27,254	7,171	176,091	38,356	199,480	20,178
TOTALS .. 1911.	11,873	4,456	1,281	4,163	49,308	14,123	2,454	367	25,952	6,789	166,304	37,501	205,274	20,065
1910.	11,700	4,599	1,092	4,031	47,750	13,749	2,150	369	27,237	7,200	159,280	37,279	199,604	19,784
1909.	11,919	4,614	1,143	3,885	44,960	12,947	2,524	453	27,833	7,710	169,451	40,872	207,283	21,296
1908.	12,411	4,797	1,203	4,014	43,838	12,678	2,984	659	29,456	8,927	194,246	48,448	236,280	24,972
1907.	12,181	4,454	1,106	3,603	42,921	12,506	2,360	428	27,809	7,492	178,898	41,173	212,299	21,679
1906.	12,386	4,490	1,090	3,555	42,993	12,452	2,085	419	27,577	7,831	184,915	45.112	203,701	22,654

* Including some cases of cattle theft.

JAILS.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. The punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

The origin of all jail improvements in India in recent years was the Jail Commission of 1889. The report of the Commission, which consisted of only two members, both officials serving under the Government of India, is extremely long, and reviews the whole question of jail organization and administration in the minutest detail. In most matters the Commission's recommendations have been accepted and adopted by Local Governments, but in various matters, mainly of a minor character, their proposals have either been rejected *ab initio* as unsuited to local conditions, abandoned as unworkable after careful experiment or accepted in principle but postponed for the present as impossible.

The most important of all the recommendations of the Commission, the one that might in fact be described as the corner stone of their report, is that there should be in each Presidency three classes of jails: in the first place, large **central jails** for convicts sentenced to more than one year's imprisonment; secondly, **district jails**, at the head-quarters of districts; and, thirdly, **subsidiary jails** and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment. The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the Superintendents of certain jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a Deputy Superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailors and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour. A Press Note issued by the Bombay Government in October, 1915, says:—"The cadre and emoluments of all ranks from Warder to Superintendent have been repeatedly revised and altered in recent years. But the Department is not at all attractive in its lower grades. The two weak spots in the jail administration at the moment are the insufficiency of Central Prisons and the difficulty of obtaining good and sufficient warders."

Employment of Prisoners.—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed; as, for example, when a large number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling. Punishments were revised as the result of the Commission of 1889. Two notable punishments then abolished were shaving the heads of female prisoners and the stocks. The latter, which was apparently much practised in Bombay, was described by the Commission as inflicting exquisite torture. Punishments are now scheduled and graded into major and minor. The most difficult of all jail problems is the internal maintenance of order among the prisoners, for which purpose paid warders and convict warders are employed. With this is bound up the question of a special class of well-behaved prisoners which was tried from 1905 onwards in the Thana Jail.

Juvenile Prisoners.—As regards "youthful offenders"—*i.e.*, those below the age of 15—the law provides alternatives to imprisonment, and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habituals) who are over 15, and therefore ineligible for admission to the reformatory school, has led Local Governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress has been made in this direction. In 1905, a special class for selected juveniles and young adults was established at the Dharwar

jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. But the public is slow to appreciate that it has a duty towards prisoners, and but little progress has been made in the formation of Prisoners' Aid Societies except in Bombay and Calcutta, though even in those cities much remains to be done.

Reformatory Schools.—These schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers.

Transportation.—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands.

Commission of Enquiry, 1919.—A committee was appointed to investigate the whole system of prison administration in India with special reference to recent legislation and experience in Western countries. The constitution of the committee is as follows: Chairman: the Hon'ble Sir Alexander Cardew, K.C.S.I., Member of the Executive Council, Madras. Members: the Hon'ble Sir James Du-Boulay, K.C.I.E., C.S.I., Secretary to the Government of India, Home Department; Lt.-Col. J. Jackson, C.I.E., I.M.S., Inspector-General of Prisons, Bombay; Lt.-Col. Sir Walter J. Buchanan, K.C.I.E., I.M.S., Inspector-General of Prisons, Bengal; Khan Bahadur Hamid Hussain, Delhi; Mr. D. M. Durai Raja, B.A., B.L., Madras; Mr. N. G. Mitchell-Innes, Inspector of Prisons, Home Office, London. Secretary: Mr. D. Johnston, I.C.S.

The Committee's inquiries had particular reference to the following subjects:—

(1) The efficiency and appropriateness of the existing systems of prison administration and restraint on liberty in India, including the Andamans and any settlements constituted under the Criminal Tribes Act, 1911; (2) the possibility of strengthening the reformatory influence of prison administration and discriminating in regard to the treatment of criminals of different classes and ages and, (3) the best means of assisting prisoners after release to regain a position in society.

[PROPOSED REFORMS.]

The report of the Committee was published in 1921 and is comprised in a bulky blue-book. Of the many recommendations made in it the following are the most important:—

General Propositions.—As far as possible, the superintendence of prisons should be in the hands of trained whole-time experts. The prison staff, from the jailor down to the warder, should be recruited with care, properly trained, and paid a salary sufficient to secure and retain faithful service. It is essential to provide that prisoners in jail shall be so classified and separated that the younger or less experienced shall not be contaminated and rendered worse by communication and association with the older or more hardened offenders. Prisoners, while in prison, should be brought under such influences as will not only defer them from committing further crime, but will also have a reforming influence on their character. It is very desirable, as far as practicable, to help such prisoners as may need assistance on their release from prison, so that they may be given a reasonable chance of securing an honest living,

Inspection and Superintendence.—A strict limit should be imposed on the number of prisoners collected in one prison; as a matter of principle the maximum should be fixed at 1,000 but for the present the maximum accommodation in any jail should not exceed 1,500. Subject to this maximum, the concentration of prisoners in central jails is desirable. In all Provinces the possibility of closing as many district jails as possible, and of collecting prisoners in central jails should be carefully considered.

Prison Establishment.—The present pay of the jailor class is insufficient and should in no case be less than Rs. 200 and should rise to at least Rs. 450 a month. In future, jailors should be gazetted officers.

A better class of warder is essential and therefore a higher scale of pay should be granted. The extent to which convict officers have been employed in Indian prisons is excessive and should be reduced. The duty of guarding prisoners in cells and dormitories at night should be entrusted only to paid officials and no convict officer should be outside his barrack at night. No convict officer should have independent charge of any file, gang, or other body of prisoners.

Classification.—Separate jails should be set apart for habitual prisoners. The existing definition of 'habitual' needs revision. The Inspector-General of Prisons should be empowered to confine with habituals any non-habituals of depraved or vicious character.

Simple Imprisonment.—This should be of two kinds (*a*) without liability to labour, and (*b*) with liability to light labour. All simple imprisonment should be of class (*b*) unless a court, not being of a lower grade than that of a first class magistrate, otherwise orders. Class (*a*) prisoners who do not elect to work should receive non-labouring diet, while other simple imprisonment prisoners should receive labouring diet.

Jail Labour and Manufactures.—In the selection of prison labour the main object to be kept in view should be the reformation of the criminal. The principal mode of employment for long-term prisoners should be intramural. The greater benefit to the prisoner will be conferred by giving him instruction in up-to-date methods of labour, and so fitting

him for free life under modern conditions. To enable this to be effectively carried out, it is necessary that, as far as possible, attention should be concentrated in each jail on one or two main industries. It is necessary to provide a market for the goods so produced and, therefore, jail industries should be adapted to meet the needs of the consuming departments of Government; those departments should be compelled to purchase articles of jail manufacture where they are similar in quality to, and not of greater price than, those obtainable in the open market To produce goods similar in quality to those obtainable in the open market, power-driven machinery in jails is essential and the existing restrictions on its use should be withdrawn. The use of power machinery in jails is justifiable, because it enables the prisoner to be given the class of labour best calculated to interest and instruct him, and to train him to habits of industry and application, and because it increases production and tends to give increased relief to the taxpayer. Jail manufactures should be carefully chosen so as to do the least possible injury to private enterprise, and with this object they should avoid competition with weak and unorganised trades or budding industries, and should be directed to those channels in which large and organised industries are already in existence.

Prison Discipline.—The principles established by the Conference of 1892 that every offence committed by a prisoner must be dealt with by the superintendent of the prison and not by any subordinate authority, and that every punishment must be recorded in the punishment book should be maintained. The award of corporal punishment should be restricted to mutiny or incitement to mutiny, and to serious assaults on public servants or visitors. The maximum period of separate confinement that may be awarded at one time should be reduced to three months. The prison punishment of solitary confinement should be abolished.

Reformatory Influences.—Remission should be extended to sentences of six months and over. The amount of remission which an ordinary convict can earn should be two days a month for conduct and two days a month for industry. Interviews and letters are a valuable reformative influence and the rules on the subject should be made as liberal as possible. Provision for education should be made in all central and district jails, but such education should be restricted for the present to prisoners not over the age of 25. The education provided should not go beyond the elementary stage, and should, wherever possible, include a certain amount of annual training. Endeavours should be made to provide religious and moral instruction for all prisoners in jail. A Hindu, Mahomedan, Buddhist or Christian Minister should be appointed to every central and district jail in which any considerable numbers of prisoners of those religions respectively are confined and should, if necessary, be paid a retaining fee.

Assistance on Release.—A central association for the assistance of released prisoners should be set up in the capital city of each Province; and local societies should be formed for each central or district jail outside the capital city. The societies should be mainly non-official in character, but the superintendent and medical officer of the prison and the sessions judge or magistrate of the district should be ex-officio members of the managing body of the local society, and the non-official visitors should be invited to join it. Financial assistance given to the societies from public funds should bear a certain proportion to the amount collected from the public; a statement of accounts should be submitted to Government each year through the central association.

The Child Offender.—The definitions of child and young person embodied in the English Children Act, 1908, and in the Madras Children Act, 1920, should be adopted generally in India, namely, (*a*) a child means a person under the age of fourteen and (*b*) a young person means a person who is fourteen but under sixteen. The commitment to prison of children and young persons, whether after conviction or while on remand or under trial is contrary to public policy and sentences of imprisonment should in the case of children and young persons be made illegal as in England. Remand homes should, as far as possible, be provided for children and young persons under remand or pending trial or inquiry. When there is no remand home, the court should endeavour to make suitable arrangements for the custody of any child or young person who is under remand. If any court finds it unavoidable to commit a child or young person to prison for safe custody, it should at once submit a special report to the district magistrate on the subject. The creation of children's courts for the hearing of all cases against children and young persons is desirable, and the procedure in such courts should be as informal and as elastic as possible. Probation officers should be appointed to aid the courts in obtaining information about children and to supervise them after release.

The Adolescent Criminal.—An adolescent means a person between the ages of sixteen and twenty-one, but power should be taken to extend the age to twenty-three. Adolescent offenders should not be sent to ordinary jails, but should be confined in separate jails or institutions to which no adult prisoners are sent.

Probation.—The proposal to amend section 562, Criminal Procedure Code, by rendering it applicable to offences punishable with imprisonment for not more than three years and extending it to offences under any special or local law, and the other proposals on this subject of the Committee appointed to revise the Code of Criminal Procedure, are generally suitable. In deciding whether a case is suitable for release on probation, the whole of the circumstances should be taken into account. Power should be taken to require a person placed on probation to pay a fine, damages, or compensation for injury or loss caused, and to be subject to such conditions as may be included in the probation order. Probation officers should be appointed as far as possible, and private individuals may also be recognised as probation workers. The Police should not be employed as probation officers, nor should they exercise supervision over, or interfere in any way with, a person placed on probation.

Fines and Short Sentences.—Those sections of the Indian Penal Code, under which imprisonment must be awarded when a conviction occurs, should be amended so as to give discretion to the court. Sentences of imprisonment for less than twenty-eight days should be prohibited.

The Indeterminate sentences.—The sentence of every long-term prisoner should be brought under revision, as soon as the prisoner has served half the sentence in the case of the non-habitual, and two-thirds of the sentence in the case of the habitual, remission earned being counted in each case. The revision should be carried out by a Revising Board, composed of the Inspector-General of Prisons, the Sessions Judge and a non-official. In all cases, the release of a prisoner on parole should be made subject to conditions, breach of which would render him liable to be remanded to undergo the full original sentence. The duty of seeing that a prisoner fulfils the conditions on which he was released should not be imposed upon the police or upon the village headman, but special officers, to be termed parole officers, should be appointed for the purpose. These parole officers should possess a good standard of education, though not necessarily a university degree, and should both protect and advise the released prisoner and report breaches of the conditions of release.

Transportation and the Andamans.—If any fresh attempt at colonisation is made, it should be in an entirely new locality. A fresh attempt at colonisation in the Middle Andaman is not recommended. The retention of the settlement at Port Blair on the present lines is not recommended. The entire abandonment of the Andamans as a place of deportation is not recommended. Deportation to the Andamans should cease, except in regard to specially dangerous prisoners and any others whose removal from Indian jails is considered by the Government to be in the public interests. The existing restrictions as to age and physical condition of prisoners sentenced to transportation to the Andamans should, unless special medical grounds exist in any particular case, cease to apply. The Indian Penal Code should be amended by the substitution of rigorous imprisonment for transportation. In provinces where the available prison accommodation will not permit of the immediate cessation of deportation of all but selected prisoners, the Star class should be the first, and the habitual the last, to be detained in Indian jails. No female should in future be deported to the Andamans, and those now there should be brought back to India and distributed among the Provinces to which they belong. In those Provinces where the jails are insufficient to detain prisoners now deported, additional accommodation should be provided as soon as possible.

Criminal Tribes.—The first essential of success in dealing with the criminal tribes is the provision of a reasonable degree of economic comfort for the people. It is therefore of paramount importance to locate settlements where sufficient work at remunerative rates is available. Large numbers of fresh settlers should never be sent to a settlement without first ascertaining whether there is work for them. Commitment to settlements should, as far as possible, be by gangs not by individuals. It is desirable to utilise both Government and private agency for the control of settlements.

The variations of the jail population in British India during the five years ending 1919 are shown in the following table :—

——	1919	1918	1917	1916.	1915.
Jail population of all classes on 1st January	122,158	115,589	115,731	122,282	112,015
Admissions during the year	696,568	605,242	547,810	550,971	568,280
Aggregate	818,726	720,831	663,541	673,253	680,295
Discharged during the year from all causes	698,591	598,673	547,931	557,525	558,008
Jail population on 31st December ..	120,135	122,158	115,610	115,728	122,287
Convict population on 1st January ..	100,220	95,468	102,208	107,806	98,963
Admissions during the year	200,442	166,303	160,556	173,441	180,466
Aggregate	300,662	261,771	262,764	281,247	279,429
Released during the year	195,164	156,373	165,575	175,587	168,508
Transported beyond seas	1,208	1,471	1,544	1,535	1,486
Casualties, &c.	3,584	4,590	2,452	2,900	2,618
Convict population on 31st December.	101,617	100,220	95,468	102,208	107,811

The daily average number of prisoners, which had steadily decreased since 1908, rose slightly in 1913 to nearly the figure of 1911. The fall in 1912 was, however, largely attributable to the release of convicts and civil prisoners on the occasion of the Delhi Durbar. The increase in 1913 was distributed among all provinces except the United Provinces of Agra and Oudh and Coorg, in which the figures continued to show decreases.

More than one-half of the total number of convicts received in jails during 1919 came from the classes engaged in agriculture and cattle tending, over 172,000 out of 200,000 are returned as illiterate.

The percentage of previously convicted prisoners was 14·10 as against 13·85 in 1918 while the number of youthful offenders rose from 364 to 471. The following table shows the **nature and length of sentences** of convicts admitted to jails in 1917 to 1919 :—

Nature and Length of Sentence.	1919.	1918.	1917.
Not exceeding one month	45,130	37,061	39,063
Above one month and not exceeding six months.	83,535	66,466	63,124
„ six months „ „ one year ..	37,979	34,018	31,488
„ one year „ „ five years ..	26,045	22,371	21,154
„ five years „ „ ten „ ..	3,866	2,966	2,564
Exceeding ten years	239	309	212
Transportation beyond seas—			
(*a*) for life	2,011	1,385	1,313
(*b*) for a term	828	859	705
Sentenced to death	863	763	752

The total daily average population for 1919 was 104,690 the total offences dealt with by criminal courts was 167, and by Superintendents 128,606. The corresponding figures for 1918 were 97,253,169 and 131,532 respectively.

The total number of corporal punishments again showed a decrease, *viz.*, from 217 to 189. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 5,687 as compared with 4,628 in the preceding year.

Total expenditure increased from £750,826 to £1,009,781, and total cash earnings from £96,450 to £167,854; there was, consequently, an increase of £186,326 in the net cost to Government.

The death rate decreased from 41·97 per mille in 1918 to 26·63 in 1919. The admissions to hospital were lower, and the daily average number of sick fell from 36·65 to 30·27. The chief causes of death were tubercle of the lungs, dysentery and pneumonia.

The Laws of 1921

BY

RATANLAL AND DHIRAJLAL

(*Editors, "Bombay Law Reporter"*).

1. Indian Tea Cess (Amendment) Act.—The object of the present amendment in the Indian Tea Cess Act (IX of 1903) is to raise the maximum rate of the cess levied on Indian tea from one-quarter of a pie per pound to eight annas per hundred pounds. The proceeds of the cess are, it will be remembered, devoted to the propaganda work in connection with the consumption of tea in India and abroad.

2. The Legislative Assembly (Deputy President's Salary) Act.—The Legislative Assembly of India, constituted under the New Reforms, required the services of a salaried Deputy President. An office has, therefore, been created ; and the salary of the incumbent is fixed at Rs. 1,000 *per mensem*, which becomes payable only for " the period during which he is engaged on work connected with the business " of the Assembly.

3. The Civil Procedure Code (Amendment) Act.—Under Section 55 of the Civil Procedure Code of 1908, as soon as a judgment-debtor arrested in execution of a decree for the payment of money, is brought before the Court and expresses his desire to apply to be declared insolvent, he is automatically released from custody. This provision conflicts with Section 23 of the Provincial Insolvency Act V of 1920, which makes such release depend on the discretion of the Court. This conflict is avoided by making the provision in the Code to depend on the discretion of the Court.

4. The Import and Export of Goods (Amendment) Act.—The provisions of the Import and Export of Goods Act XI of 1916 have been extended for another period of a year ending with the 31st March 1922.

5. The Indigo Cess (Amendment) Act.—The Indigo Cess Act III of 1918 levied cess on indigo at the rate of " one rupee per maund of 82-2/7 pounds avoirdupois." The maximum rate is now raised to "one rupee eight annas per hundredweight of one hundred and twelve pounds avoirdupois."

6. The Indian Finance Act, 1921.—The Indian Administration have every year to devise means to provide for the increased expenditure in almost all branches of its service. This increase presses heavily in two directions. First, the salaries have to be raised ; and the general costs and expenses have also proportionately grown. To meet these, the Legislature have to pass a measure permitting additional taxes. The increase has this year been divided into three branches : (1) tariff ; (2) post ; (3) income and super tax.

Under the first head of tariff, the general *ad valorem* import duty has been raised from 7½ per cent. to 11 per cent., except in the case of matches and certain articles of luxury. The machinery and stores imported for use in cotton mills are no longer free of duty, but amenable to the general tax. Hitherto match-boxes were liable to an import duty of 7½ per cent. That duty is replaced by a specific import duty of 12 annas per gross boxes of matches. Duty on liquors is increased to 3 annas per degree of proof per gallon. Certain articles of luxury, *e.g.*, confectionery, gun-powder, motor cars, clocks and watches, electroplated ware, musical instruments, glass bangles and beads, gold and silver plate, silk piece-goods, cinematograph films, fire-works, ivory, jewellery, prints engravings and pictures, pneumatic rubber tyres and tubes, smokers' requisites and toys, are all subjected to an *ad valorem* duty of 20 per cent. The import duty on sugar has been raised from 10 to 15 per cent.; while that on tobacco, by 50 per cent.

There are drastic changes in the second head of post. The intensely popular one-pice post card was almost guillotined, but escaped miraculously. It will remain the poor man's friend and the businessman's help. The rates on letters have undergone a change. Letters weighing ½ tola and under bear ½ an anna postage ; those weighing up to one tola can take 9 pies stamp ; and those weighing from one tola to 2½ tolas will bear 1 anna postage. The postage on book, pattern and sample packets has been raised so that half an anna is to be paid for every five tolas of weight In the case of registered newspapers, the lower rate of one pice per every eight tolas has remained unchanged ; but the maximum limit of weight for half-anna post has been cut down from 40 tolas to 20 tolas. The rate on parcels also is doubled. It is now two annas for every twenty tolas.

The changes in the income tax and super tax rates are equally great. The untaxable minimum is preserved at Rs. 2,000. The income from Rs. 2,000 to Rs. 5,000 is taxed at five pies in the rupee ; that from Rs. 5,000 to Rs. 10,000 at six pies in the rupee ; and the one from Rs. 10,000 to Rs. 20,000 at nine pies in the rupee. The income of Rs. 20,000 to Rs. 30,000 is taxed at one anna in the rupee ; the one of Rs. 30,000 to Rs. 40,000 at one anna and two pies in the rupee ; while that of Rs. 40,000 to Rs. 50,000 at one anna and four pies in the rupee. The rates of refund are also proportionately raised but in the reverse order. The super-tax up to income of Rs. 3,00,000 has remained stationery. The tax on incomes from Rs. 3,00,000 to Rs. 3,50,000 has been raised from 36 pies to 42 pies ; while incomes of Rs. 3½ lacs and above are subjected to a tax of 48 pies in place of 36 pies in the rupee.

7. The Calcutta University Act.—The change of the seat of Government of India from Calcutta to Delhi necessitated the change of

relationship between the Governor-General of India and the Calcutta University. The Calcutta University is brought into intimate touch with the Governor of Bengal, who is now to be its Chancellor.

8. **The Hindu Transfers and Bequests (City of Madras) Act.**—The lay mind is apt to revolt at the Rule of Perpetuity. The rule forbids the tying up by a person of his property, whether by a transfer in his own life-time or by a will to operate on his death, beyond the life-time of one or more persons living at the date of the transfer or the decease and minority of some person who shall be in existence at the expiration of that period. The rule is against the inborn sentiment of the Hindu or the Mahomedan. The Mahomedan has escaped from the rigour of the rule by the Mussulman Wakf (Validating) Act of 1914. The Hindu has been able to modify its effect by a provision that such transfer or disposition shall not be invalid merely by reason only that the transferee or legatee was an unborn person at the date of the transfer or the death of the testator This modification was effected in the Madras City by the enactment of Madras Act I of 1914, for the rest of India it was done by Act XV of 1916. The Madras High Court held recently that the Madras Act could not operate in the City of Madras, as the Madras Legislature had no power to curtail the rights of citizens in the City, which were governed by the Hindu Law as it stood when the Royal Charter Act, 24 and 25, Vic. c. 104 was passed. To remove this doubt, the present Act has been passed.

9. **The Enemy Missions Act.**—During The Great War it was found that a number of Missions were tainted by German influence or were in fact German Missions. The British Government transferred the management of those Missions to the various custodians of enemy property, during the existence of the War. The management has since been transferred to the Boards of Trustees in different parts of the country. The trustees have since been carrying on the educational, religious and charitable work of the displaced missions. The above arrangement has received legislative sanction by this Act.

10. **The Indian Marine (Amendment) Act.**—The object of this measure is to obviate a difficulty in procedure in the trial of a Royal Indian Marine Officer by an Indian Marine Court. Before the Court could be assembled, the sanction of the Governor-General in Council had to be obtained; this resulted in great delay of the trial. It is now provided that the sanction of the Director of Marine is sufficient. This will expedite hearing of cases by the Marine Court.

11. **The Indian Works of Defence (Amendment) Act.**—The Amendments sought to be made in the Indian Works of Defence Act VII of 1903 are of a formal nature and are necessitated by the recent change in the organisation of the Army in India.

12. **The Negotiable Instruments (Amendment) Act.**—The Negotiable Instruments Act XXVI of 1881 was amended last year by providing for excuse of delay in making presentment for payment when the delay was caused by circumstances beyond the control of the holder. This was embodied in Section 75-A, which was copied from Section 46 (i) of the English Bills of Exchange Act, 1882. The scope of Section 75-A is now extended so as to excuse delay in presentment for acceptance. Further, the time-limit within which bills are to be accepted for presentment is extended from twenty-four hours to forty-eight hours.

13. **The Carriers (Amendment) Act**—The liability of a common carrier in India is brought into a line with the liability of the Indian Railway. The present Act modifies the liability of the common carrier, in the case of scheduled articles not declared under Section 3 of the Act, for loss or damage arising from negligence on his part or on that of his agents or servants. The liability of the common carrier in this country is now similar to that in England.

14. **The Indian Lac Cess Act.**—An export duty is levied at the rate of four annas per maund in the case of lac and two annas per maund in the case of refuse lac, exported from any customs port to any port beyond the limits of British India (Section 3). The proceeds of the cess are to be handed over to the Lac Association, who are to apply it to measures for the promotion of improved methods of cultivation and manufacture of lac (Section 4). The proceeds of the lac cess remaining unexpended, when Sections 2 to 6 should cease to be in force shall vest in His Majesty (Section 8).

15. **The Indian Post Office (Amendment) Act.**—It has been found that dutiable articles received by post from beyond British India are not systematically appraised. It is therefore enacted by Section 24-A that any Officer of the Post Office may be empowered to deliver any postal article received from beyond British India and suspected to contain any thing liable to duty, to a Customs authority who shall deal with it under the provisions of the Customs Act, 1898.

16 **The Indian Penal Code (Amendment) Act.**—This Act purges the Indian Penal Code of a piece of barbaric penalty. The sentence of forfeiture, whatever fascination it might be deemed to possess in bye-gone ages, is now universally regarded as an offensive anacronism. On account of its apparent cruelty it is rarely put into practice. The Legislature has wisely removed a *brutum fulmen* by repealing Sections 61 and 62 of the Code. The offences under Sections 121, 121-A and 122, which were visited with orders of forfeiture, are now relieved of their burden and made punishable with fine instead.

17. **The Cattle Trespass (Amendment) Act.**—The scale of fines imposed for the cattle impounded has been fixed by the Cattle Trespass Act as far back as 1871. The fixed scale operates alike throughout the country, independent of the local conditions. In the case of habitual trespass, the fine is usually doubled. This system is now done away with; and the new Section 12 regulates the scale of fees according to the varying circumstances of each province by notifications to be issued from time to time, by the Local Government concerned.

18. **The Maintenance Orders Enforcement Act.**—One of evils of the War was the desertion of wives by their husbands, and of the children by their fathers at War. This led to orders passed by Courts for their maintenance. The orders required machinery to enforce them. But where the defaulting parent or husband went outside the jurisdiction of the Court, the matter was one for international convention Such a convention was held in 1916 and its resolutions were crystallised in an Act of the British Legislature. The present enactment is on the lines of the English Act. A provision is first of all made for reciprocal arrangements for enforcement of maintenance orders within the British Empire (Section 3). Maintenance orders passed in other parts of British Dominions are to be registered in British India(Section 4). Similarly, maintenance orders passed in British India can, where necessary, be transmitted to another reciprocating territory (Section 5). The Court of Summary Jurisdiction in British India has the power to make provisional maintenance orders against persons resident in His Majesty's Dominions outside British India (Section 6); and it has also the power to confirm maintenance order made out of British India (Section 7). Maintenance orders registered in British Indian Courts can be enforced as an order made by the Court itself (Section 8).

19. **Land Acquisition (Amendment) Act.**—The provisions of the Land Acquisition Act 1 of 1894 were, in their working, found deficient in not providing for sufficient appeals. It has been held by the High Court of Bombay in *Nathubhai* v. *Manordas* (14 Bombay Law Reporter, 325) and *Ahmedbhoy* v. *Waman* (16 Bombay Law Reporter, 72) that when a claim of less than Rs. 5,000 in value was decided by a lower Court, appeal from that decision lay, under Section 16 of the Bombay Civil Courts Act XIV of 1869, to the District Court. But there the right of appeal exhausted itself and no further appeal was permissible under the Act. It is now provided that in cases like these a further appeal lies to the High Court (Section 2). Again, it was held, by His Majesty's Privy Council, in *Rangoon Botatoung Company* v. *Collector of Rangoon* (14 Bombay Law Reporter, 833) and by the High Court of Bombay in *Special Officer, Salsette Building Sites* v. *Dosabhai* (14 Bombay Law Reporter, 1694) that when a claim valued at more than Rs. 10,000 has been decided by the High Court in appeal, no further appeal lay to the Privy Council from such decision. Section 2 now reenacts Section 54 in such a way as to provide appeals to the Privy Councils in all such cases.

The Legislative Session 1921.

The new Indian Legislature, consisting of Council of State and Legislative Assembly, was ceremoniously inaugurated by His Royal Highness the Duke of Connaught in Delhi on February 9.

Both Houses had held preliminary meetings.

The Council of State met on February 3, when the Hon. the President, Mr. A. P. Muddiman, C.S.I., C.I.E., first subscribed the oath and signed the roll and was followed in this duty by other Hon Members. The President announced that H E. the Governor-General had nominated the following members to be on the panel of chairmen.—The Hon. Mr V. S. Srinivasa Sastri, the Hon. Sir Alexander R Murray, the Hon. Mr. Maneckji Dadabhoy and the Hon Sir Dinshaw Wacha. The Council met again on February 5 for other formal business. The President announced that at the first meeting after the inauguration, Government proposed after minor Legislative business to take up the Hon Mr Srinivasa Sastri's Resolution for the appointment of a Committee to examine the Repressive Laws now on the Statute Book

The Legislative Assembly also met on February 3, when the President, the Hon. Mr. Alexander F. Whyte, led its Members in taking the oath and subscribing the roll. Nominations for the election of Deputy President were received and the names of Mr. Sachchidananda Sinha, Dr. Sir Deva Prasad Sarbadhikari and Dr. H. S Gour were duly proposed and seconded. The Assembly met again on February 5 when the ballot for the election of Deputy President was taken. The voting was Sir Sachchidananda Sinha 67, Dr. H. S. Gour 34, Sir Deva Prasad Sarbhadikari 22. The Government announced that at the first meeting of the Assembly after the inauguration a Resolution by Mr. Jamnadas Dwarkadas relating to the Administration of Martial Law in the Punjab would be taken up.

His Royal Highness the Duke of Connaught inaugurated the Legislature at a joint session in the Assembly Chamber. His Royal Highness entered the Chamber in procession and took his seat in a golden chair placed with a golden foot stool on a carpet of gold on a dais in the place duly occupied by the Presidential Chair.

H. E. the Viceroy, Baron Chelmsford, entered in procession immediately afterwards and took his seat in a similar chair immediately on the right of the Duke. The Presidents of the two Houses occupied chairs on the floor of the House facing the dais.

The Viceroy, who was wearing the robes of the Star of India, opened the proceedings with a lengthy speech in which he summarised the evolution of British Policy in India and in particular the gradual development of Constitutional Government. "The increasing association of the people of India with the work of Government," he said "has always been the aim of the British Government. In that sense a continuous thread of connection links together the Act of 1861 and the declaration of August, 1917. In the last analysis the latter is only the most recent and most memorable manifestation of a tendency that has been operative throughout British rule. But there are changes of degree so great as to be changes of kind, and this is one of them. For the first time the principle of autocracy, which had not been wholly discarded in all earlier reforms, was definitely abandoned; the conception of the British Government as a benevolent despotism was finally renounced; and in its place was substituted that of a guiding authority whose role it would be to assist the steps of India along the road that in the fulness of time would lead to complete self-government within the Empire. In the interval required for the accomplishment of this task, certain powers of supervision, and it need be of intervention, would be retained, and substantial steps towards redeeming the pledges of the Government were to be taken at the earliest moment possible."

The Duke of Connaught delivered a lengthy and deeply impressive address. He first read a message from the King Emperor. In this, His Majesty sent to the members of both the Indian Legislature and the Provincial Councils his congratulations and earnest good wishes. His Majesty said: "For years, it may be for generations, patriotic and loyal Indians have dreamed of Swaraj for their motherland. Today you have beginnings of Swaraj within my Empire, and widest scope and ample opportunity for progress to the liberty which my other Dominions enjoy" His Majesty emphasised the very special responsibilities vested upon the first representatives of the people in the new legislatures and declared that he would watch their work with untailing sympathy and resolute faith.

His Royal Highness said there was in history no parallel for the constitutional change which that day's function initiated. "Political freedom has often been won by revolution, by tumult, by civil war, at the price of peace and public safety. How rarely has it been the free gift of one people to another, in response to a growing wish for greater liberty and to growing evidence of fitness for its enjoyment; Such, however, is the position of India to day." His Royal Highness emphasised that as H. E. the Viceroy had observed, "the principle of autocracy has all been abandoned." He told the House that the Government would give the fullest possible effect consistent with their own responsibilities to Parliament to the principle of the new constitution that the policy and decisions of the Government of India should be influenced to an extent incomparably greater than hitherto by the views of Indian Legislature. His Royal Highness addressed a few words of personal sympathy to H. E. the Viceroy and formally declared duly open the Council of State and the Legislative Assembly. Finally he addressed to the Members of both Houses a few personal words. He noted the bitterness and estrangement that he saw around him and testified to His Majesty's deep concern at the terrible chapter of events in the Punjab. His Royal Highness made a personal appeal to all, "put in the simple words that come from my heart, not to be coldly and critically inter-

preted, to bury along with the dead past the mistakes and misunderstandings of the past, to forgive where you have to forgive and to join hands and to work together to realise the hopes that arise from to-day."

The Council of State again met on February 14. The first hour was given up to questions. Government then introduced the Code of Civil Procedure (Amendment) Bill and the Maintenance Orders Enforcement Bill. The Hon. Sir Maneckji Dadabhoy, by special permission, moved a recommendation to Government that the speeches delivered by H.R.H. the Duke of Connaught and H. E. the Viceroy at the inauguration ceremony be printed in all important vernaculars and freely distributed throughout the length and breadth of the country at the cost of Government. The Hon. Member and others who followed him referred to the epoch-making character of the two speeches and the resolution was carried unanimously.

The Hon. Mr. Srinivasa Sastri then moved for the appointment of a Committee to examine the Repressive Laws now on the Statute Book " and report whether all or any of them should be repealed, and, in cases where repeal is not necessary, whether the laws in question should be amended and, if so, how." Mr. Sastri specially referred to the Rowlatt Act, " the unblest mother, I must say, of a monstrous brood of evil," to the deportation Regulations from 1818 to 1827, to the Press Act, and to the Act authorising the Government of India to constitute special tribunals to try certain offences. He also mentioned the Seditious Meetings Act, the Newspapers Incitement to Offences Act and the Acts relating to conspiracies. He referred to H. R. H. the Duke of Connaught's references to the new era of political freedom in India and said it would be incongruous with the popular liberty now inaugurated if such laws continued on the Statute Book in their present form. Difficulties and misunderstandings, he said, there must be, in future, " but revolution and tumult and Civil War there need not be if history can teach and mankind can learn. That, sir, is non-violent co-operation, not non-co-operation, which may begin in non-violence and in professions of non-violence, but through the imperfections and weakness of the material on which it works, cannot but end in violence and bloodshed." The Hon. Mr. G S. Khaparde moved an amendment recommending the immediate repeal of five Repressive Laws. In a debate lasting some hours, numerous unofficial members supported the resolution and only one supported the amendment. The Hon. Sir William Vincent, Home Member of the Government of India, said he would not object to the resolution subject to certain minor Regulations. The amendment was negatived without the decision, three other amendments were withdrawn and the resolution was carried unanimously.

The Legislative Assembly, after the inauguration ceremony, held their first meeting on February 15. One hour having been devoted to questions, the President said that if as time went on the number of questions was as great as at present the House would have to find means for dealing with them. He reminded the Assembly of the special restrictions which the House of Commons had applied in a similar difficulty. The President then announced that he appointed Sir Deva Prasad Sarbhadhikari, Sir Jamsetji Jeejeebhoy, Sir Logie Pirie Watson and Chaudhuri Shahab-ud-Din as a panel of chairmen for the Assembly.

The Hon. Dr. T. B, Sapru, Law Member of Government, having introduced the Bill determining the salary of the Deputy President at Rs. 1,000 per annum, and the Hon. Sir Thomas Holland, Member of Commerce and Industry, having introduced the Indian Tea Cess (Amendment) Bill, Mr. Jamnadas Dwarkadas moved his resolution recommending Government to declare the connection of India with the British Empire to be based on the principle of equal partnership and perfect racial equality, to express regret that the Martial Law Administration in the Punjab in 1919 departed from these principles, to mete out deterrent punishments to officers who were found guilty and to relieve Indian Revenue of payments in pensions or otherwise to them and to assure adequate compensation to the families of those killed or injured.

The debate lasted for 5 hours, including an adjournment of 50 minutes for luncheon. Indian unofficial members in all parts of the House participated and the speakers on the Government Benches were H. E. the Commander-in-Chief, the Hon. Sir William Vincent, Sir Godfrey Fell and the Law Member, the Hon. Dr. Sapru. The unofficial speakers unanimously supported the resolution. The Commander-in-Chief as one who had only recently arrived in India and was therefore in no way connected with the disturbances in 1919 declared himself " fully alive to the mistakes and the errors that were committed." He impressed upon the House how the army " dread the day " when they are called upon to aid the Civil Power in the suppression of disturbances and repudiated " any idea that the repressive measures that may be necessary should be intended directly to influence any other situation at a distance from the immediate seat of the disturbance itself." The Hon. Sir William Vincent, after referring to the want on murders and crimes of violence by which the very structure of the administration had been threatened in the Punjab, admitted that " on the other hand we have overdrastic and severe punishment, the excessive use of force and acts which have been interpreted as calculated to humiliate the Indian people in a manner which cannot but be regarded as unpardonable—morally indefensible at any time but more so than ever at a time when this country is about to enter upon a system of responsible Government." The Government of India, he said, repudiated any idea that force was to be used on any occasion in excess of the absolute requirements of the case. Government by the issue of a special manual for the use of officers and by other measures had taken every possible step to prevent the recurrence of such acts as had caused a blot on the administration of Martial Law in the Punjab.

Government expressed their disapproval of the improper acts that were committed there and their deep regret to those who had suffered through them. But the punishment of the officers concerned

should not, he said, be vindictive and he showed the House how severely the action already taken by Government in this respect had been felt. Mr. Darcy Lindsay, speaking on behalf of the elected European Members of the Assembly, supported the views and sentiments expressed by the Hon. the Home Member. Finally, yielding to an appeal by Mr. Eardley Norton, Mr. Jamnadas Dwarkadas, with the consent of the House, withdrew clause 3 of his resolution, calling for deterrent punishments to guilty officers, and the resolution as amended was unanimously adopted.

The Council of State met on February 16 for unofficial resolutions. First of these was one by the Hon. Lala Sukhbir Sinha recommending Government to have an Ayurvedic and Tibbi Medical College in every province, and to take measures to develop Indian drugs and to appoint vaidyas and hakims in every dispensary. It was thrown out by 32 votes to 11, after occupying the House up to the luncheon adjournment. The Hon. Mr. Maricair next moved for the removal of restrictions on the export of rice from India, but Government having shown their anxiety lest there should prove still to be a shortage of food supplies in India owing to the failure of winter rains, after the early cessation of the 1920 monsoon, the resolution was after full discussion withdrawn.

The Legislative Assembly again met on February 17 and proceeded with unofficial resolutions. The House had evidently received as a warning the fact that the discussion of two resolutions for a whole day by the Council of State on February 16 had wasted the opportunities of other unofficial Hon. Members to move resolutions. Rai J. N. Mujamdar Bahadur at the outset said he had a resolution sixth on the list, but that the five Hon. Members who had precedence of him were willing to let him move his resolution first. The President pointed out that if the Hon. Members chose, after having gained their precedence, to dispense with it in favour of others, that was not the business of the Chair, but they could only do so by withdrawing their resolutions and thereby depriving themselves of the rights legitimately won in the ballot and incurring the danger of not getting their resolutions discussed at all. The Rai Bahadur thereupon withdrew his request.

Mr. N. M. Samarth moved a resolution "that the Local Governments be given collectively a voice in determining the Military expenditure" and attempted to justify his proposal on the ground of the financial contributions contributed by the Provinces to the Government of India Exchequer. The Finance Member pointed out the practical difficulties of the suggestion and showed that the provincial contributions were also used for the Railway, Geological, Archæological, Survey and other departments, so that one might ask why should not the Provinces have a voice in the expenditure of every department. The resolution was negatived without a division.

Mr. Wali Mahomed Hussanally moved for the increase in the number of I. C. S. posts open to members of the Provincial Civil Service. Mr. S. P. O'Donnell, Home Secretary, said Government's view of this matter had nothing to do with the question of the Indianisation of the I.C.S. but, they objected, as the Public Services Commission had done, to making promotion from the Provincial Civil Service one of the main avenues of entrance to the I.C.S., their reason being the practical one that the Provincial Service was recruited to fill the minor charges in the Civil Administration, that the work of its members was not on the same level as that required of the I.C.S. and that the officers selected for promotion could only be chosen at a relatively late stage of their careers. After a prolonged debate, the resolution was adopted by 68 to 34.

A resolution by Rao Bahadur T. Rangachariar in favour of the improvement of the conditions of travel of 3rd class passengers was carried and the House after a further hour's debate also accepted the following terms of a resolution moved by Mr. P. S. Sivaswamy Iyer:—"This Assembly recommends to the Governor General in Council that notwithstanding anything contained in Parts I and II of the Report of the Esher Committee, the Army in India should be entirely under the control, real as well as nominal, of the Government of India, and should be free from any domination or interference by the War Office on matters of military policy, organisation or administration and that such co-ordination as may be desirable between the military policies and organizations of different parts of the Empire, should be secured by discussion and agreement, at Conferences at which India is adequately represented."

The Assembly sat again on February 19 for official business. The Indian Tea Cess Amendment Bill was passed, the Indian Penal Code Amendment Bill, the Indigo Cess Amendment Bill and the Import and Export of Goods Amendment Bill were introduced. The last named measure was required to be extended for another year to give Government power to control the export of food stuffs, coal, etc.

The House next proceeded with a series o official resolutions recommending the ratification by Government of various conventions and recommendations adopted by the Labour Conference held from October 29, 1919, and January 27, 1920, at Washington under Article 23 of the Covenant of the League of Nations, embodied in the Peace Treaty of Versailles. The resolutions were similarly adopted by the Council of State at a meeting of their held on February 21. The discussion by the Council was interrupted by a motion for adjournment by the Hon. Mr. Bhurgri in order to call attention to the views of Indian Mahomedans on the question of relations with Turkey, the motion being withdrawn after discussion.

When the Assembly met again on February 22 it adopted without discussion the Bill determining the salary of its Deputy President. The Indian Limitation Amendment Bill was referred to Select Committee. The Indigo Cess Amendment Bill and the Import and Export of Goods Amendment Bills were passed. On the motion of the Finance Member the House ordered the elections of eight of their members to the

Committee on Public Accounts and of not more than ten of their members, to which one should be added by the Governor-General, to the Standing Finance Committee. A Government resolution for the appointment of a Committee of officials and non-officials to examine the Press and Registration of Books Act of 1867 and Indian Press Act of 1910 and to report what modifications, if any, were required was adopted, after a debate, in which the Home Secretary stated that Government had introduced the motion in response to unofficial opinion and in which unofficial members expressed their appreciation, desire and determination to respond in the true spirit of co-operation

The Council of State again sat for unofficial resolutions on February 23 and the first motion was one by the Hon. Sir Maneckji Dadabhoy for the appointment of a Committee of both Houses " to explore the possibilities of improvement in the position of the existing Government stocks and to advise Government on the question of future loans, both for State purposes and for Railway and Irrigation purposes." Sir Maneckji specially emphasized the political trouble that might be caused by the almost unmarketable prices of Government 3 and 3½ per cent. stock. Mr. E. M. Cook, Financial Secretary, replying on behalf of Government, shared the Hon. Member's concern at the very great depreciation of Government's securities, but showed that there lay ahead the necessity for large loans for railway, irrigation and other capital or quasi-capital, productive or unproductive expenditure, which could obviously only be raised by further raising the rate of interest and consequently further depressing the older securities. He moved an amendment eliminating the recommendation for the appointment of a committee and transforming the resolution into one demanding that financial policy should be directed so as to ensure the rehabilitation of Government securities with due regard to the necessity of funding the temporary debt and to the provision of capital expenditure for productive purposes. The Finance Member, in strongly supporting the amendment, laid stress upon the difficulty of discussing publicly and in formal committees matters which might affect the finances of institutions which the members represented and of coming to any recommendations without materially affecting the money market and he showed the House that if the amendment be adopted, Government would consult everybody whose opinion might be of value. He showed that the securities of the Government of India had not dropped nearly so seriously as those of other countries and pointed out to the fundamental soundness of the Indian financial position. The amendment was accepted.

The Hon. Mr. Bhurgri moved a recommendation for early steps " to place the Universities of India on a more democratic basis." After considerable ventilation of unofficial views the resolution was withdrawn on the ground, to which the Hon. Mr. Shafi, Member of Education, drew attention, that education was a provincial subject.

The Hon. Mr. Lalubhai Samaldas raised an extremely interesting debate by moving that Government should address the Secretary of State with a prayer that they be granted " full fiscal autonomy under the direction of Indian Legislature." The outstanding features of the debate were speeches by Dr. Sapru, Sir William Vincent and Mr. Sastri. Explaining the present position Dr. Sapru pointed out that the Secretary of State could not formally grant what the resolution demanded without overriding the clear decision of the statute and that the effect of doing so would be even to deprive the Crown of its power of veto, which according to strict constitutional law, applied to the self-governing Colonies just as to India, though by the repeated exercise of convention through a long series of years the practice had grown that in regard to matters of a fiscal character decided by the Colonial Legislature the Crown did not as a matter of fact exercise that veto. Mr. Sastri endorsed Dr. Sapru's explanation and said " that what fiscal autonomy we ought to enjoy, has been granted to us as part of a large proposition that has been enunciated." He claimed that the demand for fiscal independence for India which was put forward by the Moderate deputation that visited England during the Joint Committee deliberations of the Government of India Bill " has been fully granted to us under the arrangements embodied in the Government of India Act and in the Joint Select Committee's report." The motion was finally accepted without a division, but amended by the addition of the words " Subject to the provisions of the Government of India Act."

When the Assembly again met on February 24 there was an interesting discussion on a resolution by Sardar Gulab Singh recommending special measures for the development of Female Education. Government's attitude was expressed by Mr. H. Sharp, Education Secretary, who said the Education Department had not asked the Governo.-General to disallow the resolution although it was a Provincial subject, but he said the position was as follows :—" If this Assembly passes this resolution, it is a recommendation to the Governor-General in Council. The Governor-General in Council cannot take that merely as a recommendation and continue to do nothing. He would have to send down some sort of recommendation to the Local Governments and that in the present circumstances, would constitute an undue interference with the work of Ministers." The Finance Member emphasized the same difficulty and the resolution was thrown out without a division. There followed an interesting discussion between the lawyers of the House on a resolution by Munshi Iswar Saran recommending Legislation " with a view to create an Indian bar, so as to remove all distinctions enforced by statute or by practice between barristers and vakils." The debate led to an exposure of the professional jealousies which exist among various sections of the Indian bar as already existing, according to whether its members are English trained or Indian trained. The Law Member said that to give effect to what the mover of the resolution intended by the motion, it would be necessary to overhaul the entire legal machinery. A feature of the debate was the tribute generally paid to the great value to the Indian Bar of the Barristers, whether English or Indian, trained

in England. Eventually the House adopted a Government amendment that before undertaking Legislation on the subject Government should consult the Provincial authorities and law associations.

Mr. Kamat then moved a resolution recommending that no action should be taken on Reports of Commissions or Committees appointed by the Secretary of State or by Government of India until the Indian Legislature has had an opportunity of discussing them. It was pointed out on behalf of Government that practice would not admit of such a resolution being carried out and the motion was accepted subject to a provision making it operative "as far as practicable."

The Annual Budget was introduced in the Legislative Assembly on March 1. The Finance Member enlarged upon the prevalent trade depression and estimated a deficit at 18¾ crores in the ensuing year. His main proposal for meeting this was an increase in the general import tariff from 7½ per cent. to 11 per cent this measure to produce with additional revenue of Rs 384 lakhs. Further tariff changes were proposed as follow :—

A specific import duty of 12as. per gross box, instead of the present *ad valorem* of 7½ per cent. on matches — Estimated to yield additional revenue of Rs. 110 lakhs.

A new scale of duties of imported liquors,— Estimated to yield an additional Rs. 94 lakhs

Increase of the general *ad valorem* duty of 7½ per cent. to 20 per cent.on article of luxury— Estimated to yield an additional Rs. 114 lakhs.

Increase of the import duty on foreign sugar from 10 to 15 per cent.—Estimated to yield an additional Rs. 65 lakhs.

Increase of 50 per cent. in the duty on tobacco other than manufactured tobacco —Estimated to yield an additional Rs. 40 lakhs.

The Finance Member further proposed a substantial increase in the surcharge imposed on railway rates in 1916, estimating an additional revenue of Rs. 5¼ crores in this source He also proposed an increase of postal rates to yield an additional Rs. 2½ crores and increase in the upper grades of income-tax, so as to work up to a maximum of 16, instead of 12 pies, per rupee as at present. The additional revenue obtainable from this source he estimated Rs. 7½ crores.

The additional taxation thus provided for amounted to Rs. 19,17 lakhs, a deficit of 18¾ crores for 1921-22 being thus converted into a surplus of Rs. 84 lakhs. All the proposals were to come into force on April 1 except the tariff increases, which would operate from March 1, the immediate introduction of the tariff changes and their operation for one month in the old financial year being estimated to yield an additional revenue during that year Rs. 70 lakhs, which would to that extent reduce the estimated deficit of 11⅞ crores in that year.

Discussion of the Budget began on March 7, when there was general criticism of the failure of Government to meet the deficit, at least in part, by more drastic curtailment of expenditure, though the taxation proposals met with general approval, subject to disagreement with details and to a wide demand for an increase of the general import tariff from 7½ to 12½, rather than to 11 per cent, this amount of additional taxation being deducted chiefly from that to be raised by increases of postal rates and railway freight. The debate, that in the Council of State and the debate in the Assembly on amendments made by the Council, continued almost daily until March 24, when the final approval of the Legislature to the Finance Bill was registered. The Budget was passed intact in all essentials, alterations being made only by the cutting of comparatively sums from items of expenditure here and there and by slight adjustments of the incidence of the new import duties. Concessions regarding the method of presenting the Budget were made by the Finance Member and established valuable precedents in procedure Some members of the Assembly on various occasions endeavoured to secure the opinion of the House against the exercise by the Council of State of amending powers in regard to Money Bills, but the weight of legal opinion was against this and when at last the Bill went to the Upper House the Council reinstated the half-anna letter post which had been deleted by the carriage of an unofficial amendment in the Assembly and everybody was glad of the rescue.

An important question that arose out of the Budget was that of building a temporary Chamber for the Assembly at Simla and of the completion of the new Capital of Delhi There was some hostility to the latter on the ground of economy, but the weight of opinion was in favour of completion There was strong feeling against voting money for another Chamber in Simla, because this seemed contrary to the indignation brought by many members from their constituencies against the hill station habit." Eventually, the money for completing the already partly built Simla Chamber was voted, it being pointed out that the building when finished with for Assembly purposes could be sold at a profit, and a resolution was carried urging Government to complete the Delhi buildings as quickly as possible, so that the flit to Simla should the sooner become unnecessary

Much discontent was expressed, during Budget discussions, against the withholding of the non-votable portion of the public expenditure, including military expenditure, from the discretion of the House. Government responded by taking the Legislature into their confidence on many matters of military policy, and in particular referred to a Committee of the Assembly the report of the Esher Committee for their consideration and report. The Committee was presided over by Dr. Sapru, Law Member, but otherwise consisted of fourteen unofficial members. It presented a unanimous report on March 21st and its recommendations took the form of fifteen Resolutions. These insisted on the purpose of the Army in India being the defence of India and the maintenance of peace within her borders and on its training being conducted with that in view. They stipulated that the army should not ordinarily be utilised outside India except for the defence of India and recommended various provisions for preserving the control of the Government of India over the Army, especially as against in-

terference by the Chief of the Imperial General Staff through the Commander-in-Chief. They demanded certain steps, including the reduction of the British ratio in the Army in India, and the formation of a short service territorial army, for the sake of economy, and the increase of facilities for Indians to enter commissioned rank. They also recommended the appointment of a Committee "adequately representative of non-official Indian opinion" to report upon military problems, especially with regard to India's claim to full responsible government and equality of status with the Dominions. The report was considered on March 28 and subject to minor amendments carried.

Among other matters of great importance was a Resolution recommending Government to ask local Governments "to stop all repressive measures now being used all over India." The main feature of the debate upon it was a speech by Sir William Vincent showing the character of the agitation being conducted by the non-co-operators and warning the House against weakening the hands of Government and their officers in face of it. This was followed by several unofficial speeches against the Resolution, and finally an amended Resolution was agreed to, making no reference to local Governments or repressive measures, but asking Government to "as far as possible avoid recourse to any proceedings under exceptional legislation in dealing with the non-co-operation movement."

Among numerous unofficial Resolutions and Bills, Mr. Seshagiri Aiyar in the Assembly secured the passage of a Bill to declare the rights of Hindus to make transfers and bequests in favour of unborn children. There was an interesting discussion on the possibility of codifying Hindu Law, though the resolution in favour of it was withdrawn, and Dr. Gour secured the passage of a resolution for the collection of opinions on the desirability of establishing a supreme court of appeal for all India.

There was also a resolution by Mr. N. M. Joshi, representative of Labour, recommending Government to introduce Legislation "for the registration of trade unions and for the protection of trade unionists and trade union officials from civil and criminal liabilities for *bona fide* trade union activities." The general burden of Mr. Joshi's argument was that trade union officials were at the present time in India considerably hampered in their activities by the present state of the latter regarding conspiracy and that in the interest of labour it was highly desirable they should be given the same freedom as union leaders enjoy in England. Eventually, the House accepted an amended resolution recommending Government to introduce "As soon as practicable . . . . such legislation as may be necessary for the registration of trade unions."

The second session of the new Legislature was held at Simla in September, 1921. His Excellency the Viceroy addressed a joint sitting of the two Houses on September 3rd. Both bodies unanimously resolved to present an address of welcome to His Royal Highness the Prince of Wales on his forthcoming visit and extended their welcome to H. E. Lord Reading on his assumption of the Viceroyalty. While this motion of welcome to the Viceroy was under discussion in the Council of State, Mr. Khaparde took advantage of the opportunity to suggest that the legislature should adopt the constitutional practice followed at Westminister of voting an address after the Speech from the Throne. The President promised to put forward some suggestions after consulting the President of the Assembly.

The question of further constitutional progress was raised by Rai Jadunath Mazumdar Bahadur, who moved a resolution for the grant of autonomy to the provinces and of responsibility in the Central Government on the termination of the term of the existing legislatures and for the grant of full Dominion Status at the end of nine years. The speeches indicated a wide divergence of opinion in the House. Sir William Vincent objected that the resolution was not consistent with the pronouncement of August 1917, the Government of India Act or the Joint Committee's Report. He asked the House as a practical body to consider whether after nine months of the working of the new Act, the British Parliament would ever agree to any change. He inquired if the Assembly was aware that out of the 250 millions residing in British India only one million were voters, and that out of that one million only 182,000, had recorded their votes. Responsible Government as he understood it, Sir William said, meant the transference of the power to the electorate. Could it be said that the electorate was sufficiently educated to understand the value of the franchise? Was there any guarantee that at the next election the non-co-operators would not come into these Councils in a majority and with their avowed object of paralysing the Government would exercise the same sanity and render the same help to the Government as the present Assembly? He warned the House against going too fast because it would hinder rather than expedite the pace of political reform in India. A Government amendment was finally accepted. It ran "that this Assembly recommends to the Governor-General in Council that he should convey to the Secretary of State the view of this Assembly that the progress made by India on the path of responsible Government warrants re-examination and revision of the present constitution at an earlier date than 1929".

Any doubts as to the powers of the Council to discuss the Budget were sought to be set at rest by Mr. Kale, on whose proposition an amendment of the Standing Orders enabling the Council to discuss the general principles of the Budget was accepted.

Sir Sivaswamy Aiyar brought forward a motion recommending the transfer of the judicial administration of the North Western Frontier Province to the Punjab High Court and the appointment of a committee to report on the expediency of the re-amalgamation of that province with the Punjab. Sir Sivaswamy contended that both the political and the judicial machinery of the North-Western Frontier Province was unsuitable and unsatisfactory, especially in the method of its working, and he described the state of affairs there as a scandal. He received general support from the non-official benches. Dr. Sapru on behalf of Government, challenged the indictments against the administration of the N. W. F. P., but he offered that Government should undertake its own private inquiry as to the advisability of the transference of the judicial machinery to the Punjab High

Court, and said that perhaps Government would appoint an Indian Additional Judicial Commissioner, Sir Sivaswamy refused the offer unless it was for a public inquiry, and as this was refused the motion was carried.

The Hon. Mr. Sethna in the Council of State moved that the administration of Aden should not be transferred to the Colonial office. Several non-official members including the Hon. Sir Dinshaw Wacha supported him. The Hon. Mr. Froom opposed and speaking from the commercial point of view stated that in the interests of the traders the proposed transfer was necessary, as Aden would then grow in importance as Singapore had grown. Mr. Bray said the attitude of the Government was one of benevolent neutrality, and that the growing expenditure on Aden weighed with them. It was bound to increase by five lakhs next year. He repeated the assurance that should this transfer take place the interests and the status of the Indians would be safeguarded. The resolution was carried, Government members not voting.

A great deal of time was devoted to discussions relating to the removal of racial disabilities and to the improvement of the status of Indians abroad. Mr. Samarth in the Assembly moved a resolution for the removal of distinctions between the Indian and European members of the Indian Civil Service in regard to criminal jurisdiction over European British subjects and also between Indians and Europeans in regard to the mode of trial, the sentence to be passed and the right of appeal. After considerable debate Sir William Vincent moved an amendment asking for the appointment of a committee to consider what amendment may be made in those provisions of the Criminal Procedure Code which differentiate between Indians and Europeans in criminal trials and proceedings and to report on the best methods of giving effect to their proposals. Mr. Rangachariar proposed an amendment to this expressly stating that the committee was appointed in order to remove racial distinctions. Sir William said that while Government recognised the principle of equality as indisputable the difficulty lay in giving practical effect to it. After a prolonged discussion the House finally agreed to Sir William's amendment, as amended by Mr. Rangachariar.

The Hon. Mr. Lalubhai Samaldas moved a resolution in the Council of State, demanding equality of status for Indians in East Africa Colonies and Protectorates as laid down in the Government of India's Despatch of 21st October, 1921. The Hon. Mr. Sarma in accepting the resolution promised that the Government would abide by the Despatch. The principle of equal citizenship had been re-enunciated and accepted at the Imperial Conference, and there could not be and would not be any deviation from that principle.

The position of Indians in the Secretariat and in regard to the highest appointments in the country also engaged the attention of the Legislature, Mr. Raza Ali moved a resolution in the Council of State, asking the Government to initiate a policy of appointing Indians to the offices of Secretary, Joint Secretary and Deputy Secretary in the Army, Marine, Education, Foreign, Political and Public Works Departments of the Government of India. Mr. Craik repudiated the suggestion that the posts were given to Europeans first as strongly as he repudiated the suggestion that they should be given to Indians simply because they were Indians. Efficiency was the sole test. He moved an amendment to the effect that Indians should be given opportunities for becoming qualified for the posts referred to and this was carried.

The Assembly rejected by 41 votes to 35 Lala Girdhari Lal Agarwala's motion regarding the desirability of equalising the number of Indians and Europeans in the posts of Governors, Chief Justices and Judges of High Courts by appointing Indians to the posts in the future till the deficiency was made up.

Mr. Subramanyam in the Assembly successfully moved a protest against the decision of the Council of Medical Education and Registration of the United Kingdom to withhold recognition from the medical diplomas of the Indian Universities until the practical training in midwifery given to medical students in India was improved.

Colonel Gidney moved for a committee to report on the enhancement of pensions in cases of those drawing an annual pension between Rs. 5,000 and Rs. 540, but his motion was negatived.

Saiyid Raza Ali moved a resolution in the Council of State recommending the removal of the highly centralised system of administration obtaining in this country under which many classes of officials, especially District Magistrates or Collectors, have vast powers. The consensus of opinion was against the resolution, and it was rejected.

Mr. T. P. Mukerjee in the Assembly brought forward a resolution recommending the separation of judicial and executive functions and urging the appointment of a committee for preparing a scheme for the purpose. The Hon. Sir William Vincent objected to the resolution on the ground that the matter was a provincial one and that the Government of India could not interfere, but the resolution was passed by 46 to 35.

Sir Maneckjee Dadabhoy in the Council brought forward a resolution that the Council be authorised, if necessary by statute, to receive from the public petitions on all matters. Mr. Craik pointed out that the question bristled with difficulties and it was referred to a small expert committee.

Mr. Joshi moved for the repeal of the Workmen's Breach of Contract Act No. XIII of 1859 and Sections 490 and 492 of the Indian Penal Code, on the ground that the Act made a civil offence a criminal offence and constituted class legislation which enabled the employers to prevent labourers from changing their masters. The basic principle of indentured labour, *viz.*, the liability to criminal punishment for a civil offence, about which they were protesting in other countries, Mr. Joshi contended, was being allowed to remain in India, and he maintained that it was nothing short of slavery. Mr. Kamat vigorously opposed the resolution. Sir William Vincent strongly repudiated the idea that the Government were helping the employers against the employed and pointed to legislation like the Trade Union Bill and the Compensation for Workmen Bill which indicated

the Government's solicitude for the welfare of labour. Mr. Joshi eventually withdrew his resolution.

Mr. Innes moved in the Assembly six resolutions, all of which were agreed to, relating to the recommendations of the Geneva Labour Conference, asking the Assembly not to ratify five recommendations as not touching India and urging that two of them should be further examined

In the Assembly Sir Vithaldas Thackersey brought forward a motion instructing the High Commissioner for India ordinarily to buy stores for India in the cheapest markets consistently with the quality and delivery, every deviation from this rule being communicated to the Government of India with reasons for the information of the Assembly. Mr A. C. Chatterji on behalf of the Government accepted the motion, provided that the cheapest market meant transactions, economical in the long run subject to abnormal conditions, and it was thus adopted.

A resolution that at the time of placing orders for materials required in India by Government, the High Commissioner should put them in the cheapest market for materials of the same quality, was moved in the Council of State by Mr. Lalubhai Samaldas and was strongly supported and agreed to.

A number of miscellaneous subjects also came up for discussion.

Professor S C. Shahani moved for the raising without any further delay, of capital needed for the construction of the Sukkur Barrage which, he said, would benefit not only Sind but the whole of India. Mr. Hailey argued that the financial situation of the Central Government was not encouraging as they had (meet the outstandings of treasury bills and unbacked paper currency notes and to face liability for loans which would be maturing and liabilities of a capital nature on central expenditure as well as demands that would be made in the near future for railway communications and transport facilities. The Sukkur Barrage, he maintained, must be financed only by the Bombay Government, though the Government of India would help to the utmost towards an early construction of the project. The motion, nevertheless, was adopted.

The Assembly agreed to Mr. Innes' motion for a committee of the Members of the Indian Legislature to report on the two specific recommendations of the Railway Committee relating to the separation of railway from general finance and to the requirements of the railways in regard to capital expenditure during the next ten years. In moving his resolution Mr. Innes remarked on the drastic nature of the recommendations. Mr. Venkatapati Raju opposed the motion, saying that the House should deal with the report comprehensively and not tackle particular issues only, leaving aside the bigger questions of the nationalisation of railways and the abolition of the Railway Board. Mr. Hailey urged that the question of finance should immediately be discussed as a decision thereon was essential.

Advantage was taken by members of both Houses of the Indian Legislature of the power they now enjoy of calling the attention of the Government to questions of urgent public importance by moving the adjournment to consider the situation in the Moplah country. In the Council of State Sir Maneckjee Dadabhoy raised the question In the Legislative Assembly Rao Bahadur T. Rangachariar, while approving of the declaration of martial law in the disturbed area, expressed his disappointment at the unpreparedness of the authorities in Malabar for the trouble and asked Government to be on their guard against any repetition in the Moplah country of the Punjab errors. Sir William Vincent urged that the whole trouble was chiefly due to the preachings of the extremist Khilafat agitators. He regretted that the tone of some of the speakers had not been quite in consonance with a message of hope and sympathy which they should have sent to officers facing great difficulties As for non-co-operation, Sir William declared that the Government's attitude towards it could not be changed by an isolated outbreak, although it viewed with anxiety the attempts to tamper with the loyalty of the troops. He hoped Government would have the support of the Assembly if it found it necessary to take action in this regard and remarked that unless the Council and the Assembly were prepared to vote more money for internal defence it would be difficult to deal with such risings.

The Legislative activities of the Assembly included the introduction of the Emigration Act Amendment Bill and there were introduced and passed through the Council and the Assembly Bills to amend the Negotiable Instruments Act, 1881, Indian Post Office Act, 1898, Indian Marine Act, 1887, Indian Works of Defence Act, 1903, and a Bill to provide for the levy of customs duty on lac exported from British India. The Bill to constitute a War Relief Trust for India, amalgamating balances of the War Relief Fund and the Patriotic and Indian Heroes' Fund, failed, as the Assembly refused to give leave for its introduction.

To give effect to the recommendations of the Committee appointed in pursuance of a resolution passed during the preceding session, Sir William Vincent introduced a Bill to repeal the Press Act, 1910, and the Newspaper (Incitement to Offences) Act, 1908, to make certain provisions in regard to the liability of editors of newspapers and to facilitate the registration of printers and publishers and to provide for the seizure and disposal of certain seditious documents. The Bill was referred to Select Committee. Sir William also presented reports of the Select Committees appointed last session on the Maintenance Orders Bill and on the Indian Penal Code Amendment Bill, and as amended by them the two Bills were passed by the Assembly. The Council of State also passed both these Bills. The amendment of the Indian Penal Code does away with the confiscation of property on conviction for the offence of waging war against the King and substitutes for it liability to fine. The Bill to amend the Indian Limitation Act was recommitted to an enlarged Select Committee. This was necessitated by certain provisions in the Bill which had caused apprehension in certain quarters and required careful consideration. Mr. Hailey's Bill to consolidate the law relating to Income-tax and Super-tax and to provide a new procedure and basis for future assessment, was referred to a Joint Committee chosen from both Houses.

While preserving the interest of the State the Bill seeks to save the tax-payer every unnecessary inconvenience and to make him feel less uncertain as to what he is really liable to pay instead of leaving his liability to vary with the varying interpretations which may be put on the law by Income Tax officials. Moreover, unlike the existing Income-Tax Act, which includes both matters of procedure and of administration and actually imposes the rate of tax, the new Bill deals with definition and procedure. It relates solely to matters of administration and method and does not seek to impose any particular rate of tax, which will be left as in England to the annual Finance Bill and will thus come up every year before the Legislature. Bills to amend the Code of Criminal Procedure and the Court Fees Act were committed to a Joint Committee and Bills to amend the Cattle Trespass Act and the Land Acquisition Act were passed, the latter with Sir Sivaswamy's amendment allowing appeals under the Act to the Privy Council, exactly in the same manner as is allowed under the Code of Civil Procedure. The Council of State passed both these bills in the form in which they had emerged from the Assembly.

The Criminal Procedure Code Amendment Bill, providing for the issue by Courts in British India of Commissions for the examination of witnesses in Courts in the Indian States, was passed by the Council of State, but in the Assembly it was postponed for further consideration, Dr Gour pointing out that the time was short and there was no provision for the punishment of witnesses who might commit perjury.

Mr. Seshagiri Iyer obtained leave to introduce a Bill to amend the Hindu law relating to the exclusion from inheritance of certain classes of heirs. On behalf of Government Dr Sapru said the official attitude would be one of neutrality towards the Bill till the opinions of the Local Governments and High Courts had been ascertained. Dr Gour introduced a Bill prescribing a registered instrument as necessary for a valid adoption, but after a long debate it was negatived by 57 votes to 50. Mr Rangachariar's motion to refer to Select Committee his Bill to amend the Transfer of Property Act was negatived as being retrograde. Mr. Seshagiri Iyer also introduced a Bill "to amend the Hindu law of inheritance in certain particulars and to remove certain doubts." Mr. Abdul Kassim introduced a Bill to provide for the registration of waqf estates and for the proper rendering of accounts by the mutwallis of such estates in British India. Mr. Latthe brought forward a Bill to amend the law relating to the emoluments claimable by Watandar Hindu priests so as to provide that no person shall be entitled to claim as a matter of right any ceremonial emoluments from any Hindu who does not call in the services of the priest claiming those emoluments. The Bill was, after some opposition, referred to Select Committee.

Supplementary estimates came up in the Assembly on the 22nd September. Mr. Hailey observed that although receipts under the Customs had fallen short the receipts under the other heads were quite up to expectations. Much, however, depended on the course of events during the next few months. The supplementary grants required amounted to Rs 3,43,32,000. Demands under most heads were carefully scrutinised and all were sanctioned except one. Objection was taken by Mr. Samarth to the demand for two lakhs rupees to meet the expenditure incidental to the proposed Indian tour of Lord Lytton's Indian Students' Committee. The opponents of this item contended that it was useless for a Committee mainly concerned with the removal of the grievances of Indian students in the United Kingdom to come out to India. Mr. Shafi pressed the necessity of the Committee's visit to India in order to enable it to grasp the real facts at both ends of the claim. He warned the House against the dangers of creating a precedent of refusing funds to an important committee which had deliberately come to the conclusion that an Indian tour was indispensable. The demand was rejected.

The Assembly agreed to a supplementary grant of a lakh of rupees towards the cost of the proposed Delegation of the Empire Parliamentary Association which was expected to visit India during the cold weather.

Mr Hailey having announced his desire to reduce the already sanctioned grant under Post and Telegraphs by two lakhs, the total demand as finally sanctioned stood at Rs. 3,39,32,000. This sum contained roughly only Rs. 1,19,00,000 as debitable to revenue, the remaining being debitable to capital on account of additional expenditure on railways, on the new Delhi, loans, etc. The total grant of Rs. 3,39,32,000, therefore, did not, in any way represent a total increased revenue expenditure such as would affect any expected surplus or deficit in the budget.

A noticeable feature of the discussion on the supplementary grants was the manner in which member after member of the Finance Committee supported the Government over the items, which had previously been passed by that body.

The deficit in Bengal having attracted the attention of the Central Government, Mr. Hailey moved that the contribution of 63 lakhs payable by the former to the Government of India be waived for three years. The Finance Member pointed out that at the lowest figure Bengal's deficit was between 120 to 130 lakhs and said the claims of Bengal could not be disregarded, especially in view of the political reaction that would result if the House refused the motion. He referred to the exceptional difficulties of Bengal and asked the Assembly to consider the question not in the interests of one province but of the whole of India. Mr. Venkatapatiraju moved to amend the resolution so as to provide for similar concessions to other provinces where financial difficulties existed. In the discussion which followed some members represented the difficulties of their own provinces, while others deprecated the spirit of Provincialism. Mr. Hailey in reply emphasised that it was within the competence of the House to show similar concessions to any other Province if necessity arose and it was therefore unnecessary to make the resolution vague by inserting in it Mr. Raju's amendment. The House rejected the amendment and adopted Mr. Hailey's motion.

Thus ended the second session of the new Legislature.

The Indian National Congress.

The following record of the early work of the Congress is written by the Hon. Sir Dinsha Wacha:—The Congress was practically founded in 1885 by the late Mr. Allan Octavian Hume, a retired member of the Indian Civil Service, and the son of the distinguished Joseph Hume, M.P., whose radicalism is so well known and who was one of the chief advocates of Retrenchment and Reform in the House of Commons in the forties or fifties. Mr. Hume had a distinguished career in the service. In his younger days when Collector and Magistrate at Etawah, he had rendered invaluable service in quelling the Mutiny in its incipient stage. For this service he was created a Civil Companion of the Bath, a rare honour in those days for a young Anglo-Indian Civil Servant. He retired from the service in 1883 after having honourably filled several high offices, the last of which was the Home Secretaryship of the Government of India. The policy of Lord Lytton's Government (1876-80) had aroused discontent in the country. The imposition of the Vernacular Press Act, commonly known as the Black Act, and the uncalled for hostilities with the Amir Shere Ali of Afghanistan which culminated in the Second Afghan War were the subject of much adverse criticism among the most moderate but enlightened Indians in all parts of the country. It was recognised in all quarters that the people should organise themselves by way of a conference to ventilate their grievances. Correspondence was passing among the Indian leaders of thought in the different provinces as to the formation of such a conference on a sound and permanent footing. The viceroyalty of Lord Ripon (1880-84) gave the necessary stimulus and encouragement. Thus by 1883, when Mr. Hume retired, the idea of the Conference had so far taken body and form that, with the sympathetic support of Mr. Hume, a Union was established after he had in 1883 the genuine support of many sterling friends of India in Parliament, especially John Bright and Mr. Stagg. Mr. Hume had been a silent but watchful observer of events and felt that he must give his active support to the movement, his heart being fully prepared to ameliorate the social, economical and political condition of the Indians. He was in close communication with the leaders in various provinces. Here it may also be worth while recording the fact that during the preliminary stage of the inception of the Congress, Mr. Hume, who had retired to Simla, had had the opportunity of consulting Lord Dufferin on the subject and it is a fact that His Lordship was at one with the object and greatly encouraged Mr. Hume in his mission. Subsequently after 1888 His Lordship, for reasons of his own, which have never been authoritatively declared, chose to assume a hostile attitude towards the organisation but it was effectually met by the speech which Mr. George Yule made in December 1888 at the Congress of Allahabad.

First Session.

Progress was so far made as to formulate the programme of a first meeting in Poona which at the time was the seat of great political activity. The Christmas week of 1885 was resolved upon for the inauguration of the Conference. Unfortunately, when the preparations were being made cholera broke out in the City of Poona and it was deemed unsafe to invite delegates there. Accordingly the seat of the first assembly was hurriedly transferred to Bombay under the auspices of the Bombay Presidency Association, with its then active honorary secretaries, Messrs. Pherozeshah M. Mehta, Kashinath Trimbuk Telang and Dinsha Edulji Wacha. It was at the same time resolved to christen it "The Indian National Congress," having regard to the fact that its principal aim was faithfully to echo the public opinion of all India. So many misleading statements were made during the earliest years of the Congress as to its aims and objects that it may be useful to relate what they are as laid down by Mr. Hume himself in a speech he made at Allahabad in 1888, on the eve of the session of the Fourth Congress at that centre. Firstly, he prefaced his enumeration of the objects by stating that "no movement in modern historical times has ever acquired, in so short a period, such an appreciable hold on the minds of India, none has ever promised such wide reaching and beneficent results." Further on, it was observed that "the Congress movement is only one outcome, though at the moment the most pronunent and tangible, of the labours of a body of cultured men, mostly born natives of India, who some years ago banded themselves together to labour silently for the good of India." As to the fundamental principles of the Congress they are:—

Firstly, the fusion into one national whole of all the different and discordant elements that constitute the population of India;

Secondly, the gradual regeneration along all lines, mental, moral, social and political of the nation thus evolved; and,

Thirdly, the consolidation of union between England and India by securing the modification of such of the conditions as may be unjust or injurious to the latter country.

The Split.

It was on the fundamental principles above stated that the Congress carried out its appointed work amidst much misrepresentation, obloquy and even abuse, till 1907 when an extreme faction of delegates deliberately chose to raise a split in the united camp. At the Congress held in Surat in that year the session had to be abandoned owing to the violent outbreak of the factional spirit of those who since have been known as "Extremists," in contrast with the overwhelming majority of those entertaining sober views who are called "Moderates;" but if the proceedings were for the time abandoned, it was not without the leading men immediately organising themselves on the spot to take ways and means for the holding of future congresses and for the purpose of framing a written constitution of which the most important part was the creed of the Congress. In other words, the unwritten aims and objects of the Congress were reduced to writing in a crystallised form. As such it may be repeated here, as it should dispel all doubts, misgivings or misunderstandings of the true aims and objects of the Congress.

"The objects of the Indian National Congress are the attainment by the people of India of a system of Government similar to that enjoyed by the self-governing members of the British Empire, and a participation by them in the rights and responsibilities of the Empire on equal terms with those members. These objects are to be achieved by constitutional means by bringing about a steady reform of the existing system of administration and by promoting national unity, fostering public spirit and developing and organising the intellectual, moral, economic and industrial resources of the country."

For some years following 1907 efforts were made to heal the split and these were without avail until 1916 when a re-united Congress met at Lucknow under the presidency of Babu Ambica Charan Muzumdar of Faridpur in Bengal. But the union then effected was purely superficial; the difference between the Moderates and the Extremists was fundamental; the Extremists captured the machinery of the Congress and from the period of the special session held at Calcutta in September 1920 the Congress passed entirely under the domination of Mr. Gandhi.

THE CONGRESS AND THE REFORMS.

The attitude of the Indian National Congress towards the Montagu-Chelmsford Scheme was fully summarised in the section Constitutional Reform in India in the Indian Year Book 1920. What is commonly known as the joint scheme of the Indian National Congress and the Moslem League which is discussed in the Montagu-Chelmsford Report will be found set out in the Indian Year Book for 1918, pp. 659, 660, 661, 662, 663, 664 and 665. As is shown in the section on Constitutional Reform the effect of this scheme was to sever the nominal unanimity between the Moderate and the Extreme Wings. The Congress went over entirely to the Extreme Wing and the Moderate Party set up its own organisation.

At the 1919-20 Session of the Congress, held at Amritsar, a qualified approval was given to the Scheme. This was expressed in the following resolutions:—

XIV.—(*a*) This Congress reiterates its declaration of last year that India is fit for full responsible government and repudiates all assumptions and assertions to the contrary wherever made.

(*b*) That this Congress adheres to the resolutions passed at the Delhi Congress regarding Constitutional Reforms and is of opinion that the Reforms Act is inadequate, unsatisfactory and disappointing.

(*c*) That this Congress further urges that Parliament should take early steps to establish full responsible government in India in accordance with the principle of Self-determination.

(*d*) Pending such introduction this Congress trusts that so far as may be possible they will so work the Reforms as to secure early establishment of full responsible government and this Congress offers its thanks to the Rt. Honourable E. S. Montagu for his labours in connection with the Reforms.

In the hot weather following the Amritsar Session of the Congress the report of the Hunter Committee on the disturbances in the Punjab was published. This aroused very bitter hostility in India. In order to deal with these and other political questions which had developed, a special session of the Indian National Congress was held at Calcutta in September under the presidency of Lala Lajpat Rai. This Congress was dominated by the influence of Mr. G. K. Gandhi who launched his non-co-operation programme and received the assent of a majority of the delegates. The cardinal features of the programme are set out in the following resolutions:—

"In view of the fact that on the Khilafat question both the Indian and Imperial Governments have signally failed in their duty towards the Musalmans of India and the Prime Minister has deliberately broken his pledged word given to them; and that it is the duty of every non-Moslem Indian in every legitimate manner to assist his Musalman brother in his attempt to remove the religious calamity that has overtaken him; and in view of the fact that in the matter of the events of April, 1919, both the said Governments have grossly neglected or failed to protect the innocent people of the Punjab and punish the officers guilty of unsoldierly and barbarous behaviour towards them and have exonerated Sir Michael O'Dwyer, who proved himself directly, or indirectly, responsible for most of the official crimes and callous to the sufferings of the people placed under his administration; and that the debate in the House of Commons and especially in the House of Lords betrayed a woeful lack of sympathy with the people of India and showed virtual support of the systematic terrorism and frightfulness adopted in the Punjab, and that the latest Viceregal pronouncement is proof of entire absence of repentance in the matters of the Khilafat and the Punjab:—

This Congress is of opinion that there can be no contentment in India without redress of the two aforementioned wrongs and that the only effectual means to vindicate national honour and to prevent a repetition of similar wrongs in future is the establishment of a Swarajya.

This Congress is further of opinion that there is no course left open for the people of India but to approve of and adopt the policy of progressive non-violent non-co-operation until the said wrongs are righted and Swarajaya is established.

And inasmuch as a beginning should be made by the classes who have hitherto moulded and represented public opinion and inasmuch as Government consolidates its power through titles and honours bestowed on the people, through schools controlled by it, through its law courts and its Legislative Councils, and inasmuch as it is desirable in the prosecution of the movement to take the minimum risk and to call for the least sacrifice compatible with the attainment of the desired object, this Congress earnestly advises:—

(*a*) Surrender of titles and honorary offices and resignation of nominated posts in local bodies;

(*b*) Refusal to attend Government levees, durbars and other official and semi-official functions held by Government officials or in their honour;

(*c*) Gradual withdrawal of children from schools and colleges owned, aided or controlled by Government and in place of such schools and colleges the establishment of national schools and colleges in the various provinces.

(*d*) The gradual boycott of the British Courts by lawyers and litigants and the establishment of private arbitration courts by them for the settlement of private disputes.

(*e*) Refusal on the part of the military, clerical and labouring classes to offer themselves as recruits for service in Mesopotamia.

(*f*) Withdrawal by the candidates of their candidature for election to the reformed Councils and refusal on the part of the voters to vote for any candidate who may, despite the Congress advice, offer himself for election.

(*g*) The boycott of foreign goods.

And, inasmuch as the non-co-operation movement has been conceived as a measure of discipline and self-sacrifice without which no nation can make real progress and, inasmuch as an opportunity should be given in the very first stage of non-co-operation to every man, woman and child for such discipline and self-sacrifice, this Congress advises the adoption of Swadeshi in piecegoods on a vast scale and, inasmuch as the existing mills of India with indigenous capital and control do not manufacture sufficient yarn and sufficient cloth for the requirements of the nation and are not likely to do so for a long time to come, this Congress advises the immediate stimulation of further manufacture on a large scale by means of reviving hand-spinning in every home and hand-weaving on the part of the millions of the weavers who have abandoned their ancient and honourable calling for want of encouragement."

These decisions were confirmed at the ordinary session of the Congress which was held at Nagpur commencing in Christmas week. The discussion ranged round two important points. The first of these was the change in the creed of the Congress and article (1) of the **Congress constitution** was altered into the following words: "The object of the Indian National Congress is the attainment of Swarajya by the people of India by all legitimate and peaceful means," the omission of the qualification within the British Empire being deliberate. The Non-Co-operation resolution was reaffirmed in the following terms:—

Whereas in the opinion of the Congress the existing Government of India has forfeited the confidence of the country; and

Whereas the people of India are now determined to establish Swaraj; and

Whereas all methods adopted by the people of India prior to the last Special Session of the Indian National Congress have failed to secure due recognition of their rights and liberties and the redress of their many and grievous wrongs, more specially in reference to the Khilafat and the Punjab.

Now this Congress while reaffirming the resolution on Non-violent Non-co-operation passed at the Special Session of the Congress at Calcutta declares that the entire or any part or parts of the scheme of Non-violent Non-co-operation, with the renunciation of voluntary association with the present Government at one end and the refusal to pay taxes at the other, should be put in force at a time to be determined by either the Indian National Congress or the All-India Congress Committee and that in the meanwhile, to prepare the country for it, effective steps should continue to be taken in that behalf:—

(*a*) by calling upon the parents and guardians of school children (and not the children themselves) under the age of 16 years to make greater efforts for the purpose of withdrawing them from such schools as are owned, aided or in any way controlled by Government and concurrently to provide for their training in national schools or by such other means as may be within their power in the absence of such schools;

(*b*) by calling upon students of the age of 16 and over to withdraw without delay, irrespective of consequences, from institutions owned, aided or in any way controlled by Government if they feel that it is against the conscience to continue in institutions which are dominated by a system of government which the nation has solemnly resolved to bring to an end, and advising such students either to devote themselves to some special service in connection with the non-co-operation movement or to continue their education in national institutions;

(*c*) by calling upon trustees, managers and teachers of Government, affiliated or aided schools and Municipalities and Local Boards to help to nationalise them;

(*d*) by calling upon lawyers to make greater efforts to suspend their practice and to devote their attention to national service including boycott of law courts by litigants and fellow lawyers and the settlement of disputes by private arbitration;

(*e*) in order to make India economically independent and self-contained by calling upon merchants and traders to carry out a gradual boycott of foreign trade relations, to encourage hand-spinning and hand-weaving and in that behalf by having a scheme of economic boycott planned and formulated by a committee of experts to be nominated by the All-India Congress Committee;

(*f*) and generally, inasmuch as self-sacrifice is essential to the success of non-co-operation by calling upon every section and every man and woman in the country to make the utmost possible contribution of self-sacrifice to the national movement;

(*g*) by organising Committees in each village or group of villages with a provincial central organisation in the principal cities of each Province for the purpose of accelerating the progress of non-co-operation;

(*h*) by organising a band of national workers for a service to be called the Indian National Service; and

(i) by taking effective steps to raise a national fund to be called the **All-India Tilak Memorial Swarajya Fund** for the purpose of financing the foregoing National Service and the non-co-operation movement in general.

This Congress congratulates the nation upon the progress made so far in working the programme of non-co-operation, specially with regard to the boycott of Councils by the voters and claims, in the circumstances in which they have been brought into existence, that the new Councils do not represent the country and trusts that those, who have allowed themselves to be elected in spite of the deliberate abstention from the polls of an overwhelming majority of their constituents, will see their way to resign their seats in the Councils, and that if they retain their seats in spite of the declared wish of their respective constituencies in direct negation of the principle of democracy, the electors will studiously refrain from asking for any political service from such Councillors.

This Congress recognises the growing friendliness between the Police and the Soldiery and the people, and hopes that the former will refuse to subordinate their creed and country to the fulfilment of orders of their officers, and, by courteous and considerate behaviour towards the people, will remove the reproach hitherto levelled against them that they are devoid of any regard for the feelings and sentiments of their own people.

And this Congress appeals to all people in Government employment, pending the call of the nation for resignation of their service, to help the national cause by imparting greater kindness and stricter honesty in their dealings with their people and fearlessly and openly to attend all popular gatherings whilst refraining from taking any active part therein and, more specially, by openly rendering financial assistance to the national movement.

This Congress desires to lay special emphasis on **non-violence** *being the integral part* of the non-co-operation resolution and invites the attention of the people to the fact that **non-violence** in word and deed is as essential between people themselves, as in respect of the Government, and this Congress is of opinion that the spirit of violence is not only contrary to the growth of a true spirit of democracy but actually retards the enforcement (if necessary) of the other stages of non-co-operation.

Finally, in order that the Khilafat and the Punjab wrongs may be redressed and *Swarajya established within one year*, this Congress urges upon all public bodies, whether affiliated to the Congress or otherwise, to devote their exclusive attention to the promotion of non-violence and non-co-operation with the Government and, inasmuch as the movement of non-co-operation can only succeed by complete co-operation amongst the people themselves, this Congress calls upon public associations to advance Hindu-Muslim unity and the Hindu delegates of this Congress call upon the leading Hindus to settle all disputes between Brahmins and non-Brahmins, wherever they may be existing, and to make a special effort to rid Hindusm of the reproach of untouchability, and respectfully urges the religious heads to help the growing desire to reform Hinduism in the matter of its treatment of the suppressed classes.

The most notable difference between the Special Congress at Calcutta and the ordinary course at Nagpur was that at Nagpur Mr. Gandhi's influence was supreme and anyone who ventured to express a difference of opinion received no hearing.

THE NON-CO-OPERATION MOVEMENT.

The launching of the non-co-operation movement is described above. Shortly before the meeting of the Congress in Christmas week in Ahmedabad the secretaries of the Congress issued a report in which they summarised the work of the year. The main lines of this report are reproduced below. It must be understood that the Editor of The Year Book takes no responsibility whatsoever for the accuracy or otherwise of the statements made in the report; they are given as published with this caveat. Some who have visited the "national educational institutions" have described the curriculum as a poor imitation of that in the Government and aided institutions; the students as marked by indiscipline and inattention. Whilst there may have been promises of a crore of rupees to the Swaraj fund, it is understood that the actual collections do not exceed thirty-five lakhs of rupees.

Congress Committee's Report:—The Nagpur Congress divided the country into 21 different provinces on a linguistic basis Congress workers were therefore engaged in organising the new Congress Committees with their subordinate bodies, viz., the District Congress Committees, the Tehsil Congress Committees and the Village Congress Committees in descending order. This work was consummated by the middle of February in almost all the provinces.

The activities of the non-co-operators were directed for the first three months of the year mainly on the boycott of law courts and Government controlled schools. The appendix at the end gives the number of students that non-co-operated in the various provinces. The total number reported comes to about 90,000. The national educational institutions number more than 800 with about 70,000 students studying in them.

The following extract from the statement of the Vice-Chancellor of the Calcutta University before the Senate on the 15th September 1921 speaks for itself :—

SCHOOLS.—The statement shows that whereas in July 1921, the recognised schools had 210,986 pupils, they had in July 1921 only 163,787 students, in other words 47,179 students have disappeared from our recognised schools, that is, nearly 23 per cent. of the students have left off their studies.

COLLEGES.—" . . . the number of students which stood at 10,492 on the 15th September

1920 and was brought down to 6,121 on the 1st March rose to 7,585 on the 10th August 1921. To put the matter briefly 12 per cent. of the students have disappeared in March 1921; nearly 14 per cent. returned to the colleges by the 10th August 1921, so that out of 10,192 the net loss was 2,907, that is more than 27 per cent."

The number of lawyers that have suspended practice in answer to the call of non-co-operation is more than 900 and that of arbitration courts started is about 2,600.

In the beginning of April the All-India Congress Committee met at Bezwada to consider the political situation of the country. It passed a resolution placing the following programme before the country commonly known as the Bezwada Programme :—

1. To collect one crore of rupees.
2. To enlist one crore of members.
3. To introduce 20 lakhs of charkhas in good working order, all before the end of June.

All the Congress workers concentrated their attention upon this programme and by the end of June, the programme was fulfilled so far as the money and the number of charkhas were concerned. Punjab alone claims to have nearly 40 lakhs of wheels spinning. The appendix gives the figures of these three per provinces.

The campaign was spontaneously started in the month of April almost all over the country with a view to purging the society of its impurities and cutting down the excise revenues of the Government. The campaign was wonderfully successful in a very short time. The excise revenues of the Government considerably decreased.

Swadeshi.

After the completion of the Bezwada programme the next item in the non-co-operation movement was naturally the Swadeshi, *i.e.*, hand-spinning and hand-weaving. In fact Swadeshi was an evident corollary of the Bezwada programme. The country had by the end of June more than 20 lakhs of charkhas in good working order and collected more than a crore of rupees towards the Tilak Swaraj Fund. The necessary complement of Swadeshi was the boycott of foreign cloth. The boycott was started by burning the foreign cloth and making bonfires.

On the 5th of October the Working Committee met at Bombay and passed a resolution asking the country to redouble its efforts and to bring about a complete boycott before the end of October. The All-India Committee at Delhi passed a similar resolution on the 4th November.

As the year was coming to a close, most of the provinces were anxious to launch upon civil disobedience including non-payment of taxes. A similar though less intense desire was expressed by some members at Bezwada in April and at Bombay in July, but the country was not prepared. The public had not sufficiently understood the secret of non-violence, and the Committee did not sanction the starting of civil disobedience. Different was the case at Delhi. The country had made vast progress in the direction of non-violence even under provocation, and the Committee at Delhi passed its resolution on Civil Disobedience allowing the Provincial Congress Committee to start individual or mass civil disobedience if they were satisfied that the conditions laid down were fulfilled.

The Provincial Congress Committee of Gujrat took the lead and allowed the Bardoli and Anand Taluqs to start mass civil disobedience or aggressive civil disobedience as it is now rightly called. Bardoli was going to begin on the 23rd November under the leadership of Mahatma Gandhi. But the Bombay disturbances on the 17th November and the following days proved that the country was not yet prepared for mass or aggressive civil disobedience. The Working Committee met in Bombay on the 22nd and 23rd, and warned the Provincial Congress Committee against embarking upon mass civil disobedience without first making certain of a peaceful atmosphere being retained throughout the province concerned.

But the phenomenal success of the hartals all over the country on the 17th November, the day of the landing of H. R. H. the Prince of Wales in Bombay, turned the heads of the Government. The Bengal Government started by declaring all the Congress and Khilafat volunteers as unlawful assemblies by a notification under the Criminal Law Amendment Act.

The Congress of 1921:—It was in the circumstances narrated in the last paragraph of this report that the Congress was held at Ahmedabad in Christmas week, 1921. The Governments of Bengal, the United Provinces, the Punjab and Madras had taken active steps to deal with the intimidation and lawlessness which had grown up round the non-co-operation campaign. This led to many arrests, including Mr. C. R. Das, the President-elect of the Congress, Lala Lajpatrai and Pandit Motilal Nehru. In place of Mr. Das Hakim Ajman Khan was elected President of the Congress. But it was throughout a one man show, and that man Mr. Ghandi. He insisted that the Congress should be run on swadeshi principles. The delegates were clothed in handspun cloth, or khaddar, they sat on the ground, there were few set speeches. The real points of difference, as usual, were settled in the Subjects Committee, not in the open Congress, which simply met to register approval of the decisions of the Subjects Committee. The work of the Congress resolved itself into one resolution appointing Mr. Ghandi dictator, with power to appoint a successor. The resolution ran as follows :—

Whereas, since the holding of the last National Congress the people of India have found from actual experience that by reason of the adoption of non-violent non-co-operation the country has made a great advance in fearlessness, self-sacrifice and self-respect, and whereas the movement has greatly damaged the prestige of the Government, and whereas on the whole the country is rapidly progressing towards Swaraj, this Congress confirms the resolution adopted at the special session of the Congress at Calcutta and reaffirmed at Nagpur and places on record the fixed determination of the Congress to continue the programme of non-violent non-

co-operation with greater vigour than hitherto, in such a manner as each province may determine, till the Punjab and the Khilafat wrongs are redressed and Swaraj is established, and the control of the Government of India passes into the hands of the people from that of an irresponsible corporation.

Whereas, by reason of the threat uttered by His Excellency the Viceroy in his recent speeches and the consequent repression started by the Government of India in the various provinces by way of disbandment of the volunteer corps and forcible prohibition of public and even committee meetings in an illegal and high-handed manner and by the arrest of many Congress workers in several provinces, and whereas this repression is manifestly intended to stifle all the Congress and Khilafat activities and deprive the public of their assistance, this Congress resolves that all activities of the Congress be suspended, as far as necessary, and appeals to all quietly and without any demonstration to offer themselves for arrest by belonging to the volunteer organisations, to be formed throughout the country in terms of the resolution of the Working Committee arrived at in Bombay on the 23rd day of November last, provided that no one shall be accepted as a volunteer, who does not sign the following pledge:

"With God as witness, I solemnly declare that (1) I wish to be a member of the National Volunteer Corps. (2) So long as I remain a member of the corps, I shall remain non-violent in word and deed, and shall earnestly endeavour to be non-violent in intent, since, I believe, that as India is circumstanced non-violence alone can help the Khilafat and the Punjab and result in the attainment of Swaraj and the consolidation of unity among all the races and communities of India, whether Hindu, Mussalman, Sikh, Parsi, Christian or Jew. (3) I believe in and shall endeavour always to promote such unity. (4) I believe in Swadeshi as essential for India's economic, political and moral salvation and shall use handspun and handwoven khadder to the exclusion of every other cloth. (5) As a Hindu, I believe the justice and necessity of removing the veil of untouchability and shall on all possible occasions seek personal contact with and endeavour to render service to the submerged classes. (6) I shall carry out the instructions of my superior officers and all the regulations, not inconsistent with the spirit of this pledge, prescribed by the volunteer boards or the working committee of any other agency established by the Congress. (7) I am prepared to suffer imprisonment, assault or even death, for the sake of my religion and my country without resentment. (8) In the event of my imprisonment, I shall not claim from the Congress any support for my family or dependents."

This Congress trusts that every person of the age of 18 and over will immediately join the volunteer organisations, notwithstanding the proclamation prohibiting public meetings, and inasmuch as even committee meetings have been attempted to be construed as public meetings, this Congress advises the holding of committee meetings and of public meetings, the latter in closed places and by tickets and by previous announcements, at which, as far as possible, only a speaker previously announced shall deliver written speeches, care being taken in every case to avoid the risk of provocation and possible violence by the public in consequence.

This Congress is further of opinion that civil disobedience is the only civilised and effective substitute for an armed rebellion, whenever every other remedy for preventing arbitrary, tyrannical and emasculating use of authority by individuals or corporations has been tried, and, therefore, advises all Congress workers and others who believe in peaceful methods and are convinced that there is no remedy, save some kind of sacrifice to dislodge the existing Government from its position of perfect irresponsibility to the people of India, to organise individual civil disobedience and massed, when the mass of the people have been sufficiently trained in the methods of non-violence, and otherwise, in terms of the resolution therein of the last meeting of the All-India Congress Committee, held at Delhi.

This Congress is of opinion that in order to concentrate attention upon civil disobedience, whether mass or individual, (whether of an offensive or defensive character) under proper safeguards and under instructions to be issued from time to time by the Working Committee or the Provincial Congress Committee concerned, all other Congress activities should be suspended, whenever and wherever and to the extent to which it may be found necessary.

This Congress calls upon all students of the age of 18 and over, particularly those studying in the national institutions and the staff thereof immediately to sign the foregoing pledge and become members of the National Volunteer Corps.

In view of the impending arrest of a large number of Congress workers, this Congress, whilst requiring the ordinary machinery to remain intact and to be utilised in the ordinary manner, whenever feasible, hereby appoints, until further instructions, Mahatma Gandhi as the sole executive authority of the Congress and invests him with the full powers of the All-India Congress Committee, including the power to convene a special session of the Congress, or of the All-India Congress Committee or the Working Committee, and also with the power to appoint a successor in an emergency.

This Congress hereby confers upon the said successor and all subsequent successors appointed in turn by their predecessors all his aforesaid powers, provided that nothing in this resolution shall be deemed to authorise Mahatma Gandhi or any of the aforesaid successors to conclude any terms of peace with the Government of India or the British Government without the previous sanction of the All-India Congress Committee to be finally ratified by the Congress, specially conveyed for the purpose, and provided also that the present creed of the Congress shall in no case be altered by Mahatma Gandhi or his successors, except with the leave of the Congress first obtained.

This Congress congratulates all those patriots who are now undergoing imprisonment for the sake of their conscience or country and realises that their sacrifice has considerably hastened the advent of Swaraj.

It has been stated that civil disobedience will start on January 31st,

The Moslem League.

The Indian Moslem League was established in 1906. Prior to that time the Indian Moslems had stood aloof from politics. Acting under the guidance of the greatest man they have produced, **Sir Syed Ahmad**, they devoted their attention to education, founding the Aligarh College with the special purpose of making up the leeway of Mahomedans in education, and left politics to the other Indian peoples. A few Mahomedans joined the National Congress and took part in its annual sessions; but the community as a whole stood aside from political movements.

In 1906 however changes occurred which impelled Indian Moslems to action. Under the Act of 1892, constituting the Indian Legislative Councils, there was no specific Moslem representation and in the elections which had taken place under that Act the Moslems had for all practical purposes failed to find selection. Therefore, when the amendment of the Act and the extension of the representative principle were under discussion, they were stirred to action. They feared lest, under an academic system, adapted only to a homogeneous people, their distinct communal interests would either secure no representation at all, or only inadequate representation. They therefore took counsel together and approached the Viceroy in deputation, headed by His Highness the Aga Khan, and presented their views in an important State paper.

First Constitution.

It was felt that in view of the changed conditions the Moslems should organise their own political society for the expression of their communal policy. This was the origin of the Moslem League. The rules and regulations of the League provided for a constitution, with provincial branches, and defined the objects of the League in the following language:—

The **objects of the League** shall be:—

(*a*) to promote among Indian Mussalmans feelings of loyalty towards the British Government, and to remove any misconception that may arise as to the intentions of Government with regard to any of its measures:

(*b*) to protect the political and other rights and interests of Indian Mussalmans and to place their needs and aspirations before the Government in temperate language:

(*c*) without prejudice to the objects mentioned under (*a*) and (*b*) of this section, to promote so far as possible concord and harmony between the Mussalmans and other communities of India.

Revised Constitution.

In 1912 and 1913 Moslem opinion as expressed by the League underwent a certain change. First at a meeting of the Council, afterwards at the annual session which was held at Lucknow, the constitution was amended so as to include in the objects of the League the attainment of a system of **self-government** in India under the Crown. The objects of the League, as defined, are thus set forth:—

The objects of the League shall be:—

(*a*) to maintain and promote among the people of this country feelings of loyalty towards the British Crown:

(*b*) to protect and advance the political and other rights and interests of the Indian Mussalmans:

(*c*) to promote friendship and union between the Mussalmans and other communities of India.

(*d*) without detriment to the foregoing objects, attainment, under the ægis of the British Crown, of a system of self-government suitable to India, through constitutional means, by bringing about, amongst others, a steady reform of the existing system of administration, by promoting national unity, by fostering public spirit among the people of India and by co-operating with other communities for the said purposes.

This change in the constitution of the League produced much discussion and was opposed by many of the older men who had led the community.

Merged in the Congress.—From the time of the Amritsar Congress the Moslem League lost its effective separate existence. It followed the Congress step by step in the change of its constitution and in the adoption of non-co-operation; its annual session is only a pale reflection of the Congress, whose resolution it accepts, with special emphasis on the Khilafat issue. Few of the leading Moslems of India take any part in its discussions, and those Moslems who are active in public life prefer to make their appearance at the Congress rather than at the nominal session of the League.

The headquarters of the League are at Lucknow.

THE LIBERAL FEDERATION.

In the Indian Year Book, 1919, the course of events which led to a definite rupture between the Extremist and Moderate sections of the Indian National Congress is set out. For some years there was growing up a strong line of cleavage between these two elements in Indian public life. It came to a head at the Surat Session of 1907 which broke up in disorder because the Extremists could not get their own way. In 1916 a nominal union between the two wings was established when a reunited Congress met at Lucknow. The unity then

established was however more artificial than real and the essential differences between the two wings were accentuated when the Montagu-Chelmsford Report on Indian constitutional reforms was published in 1918. A grave question then arose as to what should be the Indian attitude towards the scheme of reforms then outlined. The Extremists at first tried to stampede the country into a rejection of the proposed reforms *in toto*. The Moderates, whilst refusing to accept every line of the Report as sacrosanct were determined to regard it as a marked development in the constitutional progress of India, and whilst pressing for an extension of the measures there proposed decided to accept them as a great step forward in the political evolution and as substantially satisfactory. The strong attitude taken by them and the growing appreciation in the country of the real liberality of the Reform Scheme prevented the irreconcilables from stampeding political opinions as they had hoped. Nevertheless there was no prospect of agreement between the two wings, mainly because the Extremists insisted on characterising the reforms as disappointing and unsatisfactory, whilst the Moderates regarded them as liberal and progressive although falling short in some respects of their ideal.

Consequently the Moderates declined to join in a special session of the Indian National Congress which was held in August 1918 to consider the Reform Scheme; it held a special conference of its own where its own ideas were put forward in a series of resolutions. The bulk of the Moderates also abstained from the ordinary Christmas Session of the Congress in Delhi in 1918; they have continued to remain aloof from the older organisation and have set up their own. The essential differences between the two wings are clearly revealed by a study of the resolutions carried at the different sessions. A brief summary of the proceedings at the Indian National Congress has been given in the preceding pages. The Moderates held their own session in Calcutta when the Chairman of the Reception Committee, Sir Binode Mitter, very clearly indicated their attitude towards the scheme. Sir Binode Mitter emphatically declared that the Act brought new opportunities of service. Hitherto Indians had had no share in the actual government of the country; they were in the position of mere critics. They must now forget merely to criticise as they would have henceforth to solve real difficulties. The Chairman of the Conference, Sir P.S. Sivaswamy Iyer, emphasised these essential points. He said that the Act constituted a decided advance upon existing conditions and it gave them great opportunities of acquiring a practical knowledge of the art of responsible government.

The essential creed of the Moderates is indicated in the principal resolutions adopted at their session which are set out below:

Important Resolutions.—(*a*) This Conference desires to convey to the Right Honourable Mr. Montagu its heartfelt appreciation of the statesmanship, courage and single minded devotion displayed by him in initiating and carrying the reform proposals and setting India firmly on the road to responsible government.

(*b*) This Conference desires to record its proud appreciation of the Right Honourable Lord Sinha's services to the country in his capacity as a member of the War Cabinet, as a representative of India at the Peace Conference and in his conduct of the Reform Bill in the House of Lords.

(*c*) This Conference desires to thank the Joint Committee for removing several defects in the original Reform Bill and improving it.

While regretting the omission to introduce some measure of responsibility in the central government, this Conference welcomes the Government of India Act of 1919 as a definite and substantial step towards the progressive realisation of responsible government. This Conference appeals to all sections of the community, European and Indian, officials and non-officials, whole-heartedly to co-operate for the successful working of the Act.

The Moderate Conference of 1920-1921 was held at Madras at the close of the year under the presidency of Mr C. Y. Chintamani, one of the new Ministers in the United Provinces. The Moderates are now known as the National Liberal Federation and are best designated by the term of Indian Liberals although the term Moderates still persists.

The resolutions of this Conference on the subject of Non-co-operation was as follows:

"The Federation expresses its emphatic disapproval of the policy of non-co-operation as calculated to destroy individual liberty of speech and action and incite social discord and retard the progress of the country towards responsible government. But the Federation feels the best way of successfully combating the non-co-operation movement is for the Government to redress the wrongs that have led to its adoption."

Special prominence was given to the question of military expenditure, the President sounding the dominant note in the statement that the reduction of the military charges was the test of the sincerity of Government.

The Federation and Lawlessness:—The Federation met in session at Allahabad in December 1921, in circumstances of some excitement. The measures adopted by some of the Provincial Governments to deal with the intimidation and lawlessness practiced by non-co-operators had produced a mild stampede amongst a section of the Liberals, who joined in the general denunciation of Repression. It was in these circumstances that the Federation passed a resolution urging full provincial autonomy at the end of the first term of the Legislatures, and subject to safeguards, popular control over all subjects in the central Government except defence, foreign affairs, relations with the Indian States and ecclesiastical affairs. Later, when the Federation re-assembled after the Subjects Committee meeting, the President stated that a large majority of the members accepted the following resolution:—"This Federation fully realises the difficulties of Government in dealing with the present critical situation and the inevitable dangers to the country of a campaign of civil disobedience and the necessity for the protection of law-abiding

and peaceful citizens against any interference with their liberties, and it recognises the duty of all patriotic citizens to support Government in all the measures necessary for the maintenance of peace and order. But it views with great concern the inauguration of a policy of indiscriminate arrests and extensive application of the Criminal Law Amendment Act and is strongly of opinion that such a policy defeats its own object by alienating popular sympathy and aggravating the general unrest. It also draws pointed attention to the fact that some local Governments and local authorities have acted with an excess of zeal and want of discretion in the matter of the arrests and with harshness and severity in regard to the sentences of which the Federation strongly disapproved. It therefore urges on Government the immediate reconsideration of its policy in order to ease the present situation."

The Federation passed a number of resolutions including one regarding the state management of railways and another supporting the present measures against the Moplahs also expressing horror at the Podanur Prison van tragedy and the hope that those responsible would be brought to book. The President, in closing the Session, warned all against the dangers of civil disobedience and fervently appealed to the country to take to constitutional agitation to attain Swaraj.

Posts and Telegraphs.

POST OFFICE.

The control of the Posts and Telegraphs of India is vested in an officer designated Director-General of Posts and Telegraphs who works in subordination to the Government of India in the Public Works Department. The superior staff of the Direction, in addition to the Director-General himself, consists on the postal side of two Deputy Directors-General (who are officers of the rank of Postmaster-General), and six Assistant Directors-General (whose status is similar to that of Deputy Postmasters-General).

For postal purposes, the Indian Empire is divided into eight circles as shown below, each in charge of a Postmaster-General :—Bengal and Assam, Bihar and Orissa, Bombay, Burma, Central, Madras, Punjab and North-West Frontier, and United Provinces. The Central Circle comprises roughly the Central Provinces and the Central India and Rajputana Agencies.

The Postmasters-General are responsible to the Director-General for the whole of the postal arrangements in their respective circles, with the exception of those connected with the conveyance of mails by railways and inland steamers which are entrusted to three officers bearing the designation of Deputy Postmaster-General, Railway Mail Service. All the Postmasters-General are provided with Personal Assistants, while those in charge of the largest circles are also assisted by Deputy Postmasters-General. The eight Postal Circles and the jurisdictions of the three Deputy Postmasters-General, Railway Mail Service, are divided into Divisions, each in charge of a Superintendent of Post Offices or Railway Mail Service as the case may be and each Superintendent is assisted by a certain number of officials styled Inspectors.

Generally there is a head post office at the head-quarters of each revenue district and other post offices in the same district are usually subordinate to the head office for purposes of accounts. The Postmasters of the Calcutta, Bombay, and Madras General Post Offices and of the larger of the other head post offices are directly under the Postmaster-General and most of them exercises the same powers as a Superintendent of Post Offices in respect of inspections, appointments, leave and punishments. The Presidency Postmasters, indeed, have one or more Superintendents subordinate to them. When the duties of the Postmaster of a head office become so onerous that he is unable to perform them fully himself, a Deputy Postmaster is appointed to relieve him of some of them, and if still further relief is required, one or more Assistant Postmasters are employed. The more important of the offices subordinate to the head office are designated sub-offices and are usually established only in towns of some importance. Sub-offices transact all classes of postal business with the public, submit accounts to the head offices to which they are subordinate, incorporating therein the accounts of their branch offices, and frequently have direct dealings with Government local sub-treasuries. The officer in charge of such an office works it either single-handed or with the assistance of one or more clerks according to the amount of business.

Branch offices are small offices with limited functions ordinarily intended for villages, and are placed in charge either of departmental officers on small pay or of extraneous agents, such as school-masters, shopkeepers, landholders or cultivators who perform their postal duties in return for a small remuneration.

The audit work of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs, who is an officer of the Finance Department of the Government of India and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountants-General, all of whom, with the necessary staff of clerks, perform at separate headquarters the actual audit work of a certain number of postal circles.

In accordance with an arrangement which has been in force since 1883, a large number of sub-post offices and a few head offices perform telegraph work in addition to their postal work and are known by the name of combined offices. The policy is to increase telegraph facilities everywhere and especially in towns by opening a number of cheap telegraph offices working under the control of the Post Office.

The **Inland Tariff** (which is applicable to Ceylon and Portuguese India except as indicated below) is as follows *subject to alterations made by the Budget of* 1922 :—

	When the postage is prepaid.	When the postage is wholly unpaid.	When the postage is insufficiently prepaid.
Letters.	Anna.		
Not exceeding half a tola	½		
Exceeding half a tola but not exceeding one tola	1		
Exceeding 1 tola but not exceeding two and a half tolas	1	Double the prepaid rate (chargeable on delivery).	Double the deficiency (chargeable on delivery).
Every additional two and a half tolas or part of that weight	1		
Book and pattern packets.			
Every 5 tolas or part of that weight ..	½		

Postcards.

Single	½ anna.
Reply	½ „

(The postage on cards of private manufacture must be prepaid in full.)

Parcels (prepayment compulsory).

(*a*) Parcels not exceeding 440 tolas in weight:—

	Rs. a.
Not exceeding 20 tolas	0 2
Exceeding 20 tolas but not exceeding 40 tolas	0 3
For every additional 40 tolas or part of that weight	3 annas.

(*b*) Parcels exceeding 440 tolas in weight:—

4 annas for every 40 tolas or fraction thereof up to 800 tolas.

Registration is compulsory in the case of parcels weighing over 440 tolas.

These rates are not applicable to parcels for Portuguese India.

In the case of parcels for Ceylon a registration fee of 2 annas is chargeable on each parcel in addition to the rates shown above.

Registration fee.

	Rs. a.
For each letter, postcard, book or pattern packet, or parcel to be registered	0 2

Ordinary Money Order fees.

On any sum not exceeding Rs. 10 ..	0 2
On any sum exceeding Rs. 10 but not exceeding Rs. 25	0 4
On any sum exceeding Rs. 25 up to Rs. 600	0 4

for each complete sum of Rs. 25, and 4 annas for the remainder; provided that, if the remainder does not exceed Rs. 10, the charge for it shall be only 2 annas.

Telegraphic money order fees.—The same as the fees for ordinary money orders *plus* a telegraph charge calculated at the rates for inland telegrams for the actual number of words used in the telegram advising the remittance, according as the telegram is to be sent as an "Express" or as an "Ordinary" message.

In the case of Ceylon the telegraph charge is calculated at the rates shown below:—

Express—Rs. 2 for the first 12 words and 3 annas for each additional word.

Ordinary.—Re. 1 for the first 12 words and 2 annas for each additional word. Telegraphic money orders cannot be sent to Portuguese India.

Value-payable fees.—These are calculated on the amount specified for remittance to the sender and are the same as the fees for ordinary money orders.

Insurance fees.—For every Rs. 50 of insured value 1 anna.

As regards Ceylon and Portuguese India see Foreign Tariff.

Acknowledgment fee.—For each registered article 1 anna.

The Foreign Tariff (which is not applicable to Ceylon except in respect of insurance fees or to Portuguese India except in respect of insurance fees and parcel postage) is as follows:—

Letters.

To the United Kingdom, other British Possessions and Egypt, including the Soudan.	2 annas for the first ounce and 1½ anna for each additional ounce or part of that weight.
To other countries, colonies or places.	3 annas for the first ounce and 1½ annas for every additional ounce or part of that weight.

Postcards Single	1½ anna.
„ Reply	3 annas.

Printed Papers.—½ anna for every 2 ounces or part of that weight.

Business Papers.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 3 annas for each packet.

Samples.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 1 anna for each packet.

(The rates shown above are those chargeable when the postage is prepaid.)

Parcels.—(Prepayment compulsory.) The rates vary with the countries to which they are addressed. The rates to the United Kingdom are—

	Via Gibraltar. Rs. a. p.
Not over 3 lbs. ..	1 8 0
„ „ 7 „	2 12 0
„ „ 11 „	3 15 0

Registration fee.—3 annas for each letter, postcard, or packet, except to Ceylon or Portuguese India for which the fee is 2 annas.

Money Orders.—To countries on which money orders have to be drawn in rupee currency, the rates of commission are the same as in the case of inland money orders.

To countries on which money orders have to be drawn in sterling, the rates are as fixed temporarily from time to time in accordance with variations in the market rate of exchange.

Insurance fees—

To countries other than those named below ..3 annas for every £5 or fraction thereof.

To Ceylon and Portuguese India .. ..2 annas for every Rs 100 or fraction thereof.

To Mauritius, the Seychelles, Zanzibar, and the British East Africa, Uganda, and Somaliland Protectorates ..4 annas for every Rs. 100 or fraction thereof.

Acknowledgment fee.—3 annas for each registered article.

Growth of the Post Office.—At the end of 1897-98 the total number of post offices was 11,742 and the total length of mail lines 126,351 miles. For the 31st March 1921 the corresponding figures were 19,416 and 1,57,301. During the year 1897-98, the total number of letters, postcards, newspapers and packets given out for delivery was 460,899,344, while for the year 1920-21 the total number of unregistered articles of the same classes given out for delivery *plus* the number of registered letters and packets posted amounted to 1,375,266,446. The number of parcel mail articles given out for delivery in the former year was 4,119,781 as compared with 14,111,036 such articles posted during the latter year. The total number and value of money orders issued increased from 11,795,041 and Rs. 24,79,45,455 in 1897-98 to 38,504,814 and Rs. 98,36,48,317, respectively, in 1920-21. During the former year the total number of articles insured for transmission by post was 326,645 with an aggregate declared value of Rs. 10,00,62,590 and the corresponding figures for 1910-11 were 1,169,428 and Rs. 26,88,78,255. As the result, however, mainly of the introduction in 1911-12 of the rule under which inland articles containing currency notes or portions thereof must be insured, the figures for 1920-21 stand at 4,510,471 and Rs. 1,37,66,71,002. The number of accounts open on the books of the Post Office Savings Bank grew from 730,387 on the 31st March 1898 to 1,877,957 at the end of 1920-21, with an increase from Rs. 9,28,72,978 to Rs. 22,86,21,716 in the total amount standing at the credit of depositors. The total staff on the 21st March 1921 numbered 102,885. The net financial result of the working of the Post Office for the year 1920-21 was a deficit of Rs. 45,99,372.

This account of the activities of the Post Office would not be complete if it were not mentioned that on the 31st March 1921 there were 33,258 active Postal Life Insurance policies with an aggregate assurance of Rs. 4,88,87,682 and that during 1920-21 it disbursed a sum of Rs. 75,46,103 to Indian Military pensioners; sold over 51¾ lakhs of cash certificates to the public; collected at its own expense a sum of Rs. 50¼ lakhs on account of customs duty on parcels and letters from abroad; and sold 15,484 lbs. of quinine to the public.

TELEGRAPH DEPARTMENT.

Telegraphs.—Up to 1912 the telegraph system in India was administered as a separate department by an officer designated Director-General of Telegraphs who worked in subordination to the Government of India in the Department of Commerce and Industry. In that year it was decided to vest the control of Posts and Telegraphs in a single officer as an experimental measure with a view to the eventual amalgamation of the two Departments.

In pursuance of this policy an experimental amalgamation of the two services was introduced in the Bombay and Central Circles from the 1st July 1912. The fundamental principles of this scheme which followed closely the system in force in the United Kingdom and several other European countries were that the traffic and engineering work of the Telegraph Department should be separated, the former branch of work in each Circle being transferred to the Postmaster-General assisted by a Deputy Postmaster-General and a suitable number of attached officers and the engineering branch being controlled by a Director of Telegraphs in charge of the two Circles. Subordinate to this officer there were several Divisional Superintendents who were assisted by a number of attached officers.

In 1914 the complete amalgamation of the two Departments was sanctioned by the Secretary of State and introduced from 1st April. The superior staff of the Direction, in addition to the Director-General himself, consists on the engineering side of a Chief Engineer, Telegraphs, with two Dy. Chief Engineers and a Personal Assistant to the Director-General. For traffic work there is a Deputy Director-General, with an Assistant and two Assistant Directors-General. On the 27th March 1920 a Controller of Telegraph Traffic was appointed to assist the Deputy Director General in the inspection of offices and in controlling telegraph traffic. In the Circles the scheme which has been introduced follows closely on the lines of the experimental one referred to above. For telegraph engineering purposes India is divided up into five Circles, each in charge of a Director. For Burma special arrangements were considered necessary and the engineering work is in charge of the Post Master-General who is a Telegraph officer specially selected for the purpose. These six Circles are divided into twenty-one Divisions each of which is in charge of a Divisional Engineer.

The telegraph traffic work is under the control of the Postmasters-General, each of whom is assisted by a Deputy Postmaster-General and a suitable staff of attached officers.

The audit work of the Telegraph Department is, like that of the Post Office, entrusted to the Accountant-General, Posts and Telegraphs, assisted by a staff of Deputy and Assistant Accountants-General.

Inland Telegrams and Tariff.—Telegrams sent to or received from places in India or Ceylon are classed as Inland telegrams. The tariff for inland telegrams is as follows:—

	For delivery in India. *Private and State.*		For delivery in Ceylon. *Private and State.*	
	Express.	Ordinary.	Express.	Ordinary.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Minimum charge,	1 8	0 12	2 0	1 0
Each additional word over 12	0 2	0 1	0 3	0 2

The address is charged for.

Additional charges.

Minimum for reply-paid telegram .. .. Acknowledgment of receipt	Minimum charge for an ordinary telegram.
Multiple telegrams, each 100 words or less	4 annas
Collation	One quarter of charge for telegram.
For acceptance of an Express telegram during the hours when an office is closed.	Rs. If both the offices of origin and destination are closed .. 2 If only one of the offices is closed. 1 If the telegram has to pass through any closed intermediate office an additional fee in respect of each such office 1
Signalling by flag or semaphore to or from ships—per telegram	The usual inland charge plus a fixed fee of 8 ans.
Boat hire	Amount actually necessary.
Copies of telegrams, each 100 words or less	4 annas.

	For delivery in India. *Press.*		For delivery in Ceylon. *Press.*
	Express.	Ordinary.	Express.
	Rs. a.	Rs. a.	Rs. a.
Minimum charge ..	1 0	0 8	1 0
Each additional 6 words over 48 in respect of India, each additional four words over 32 in respect of Ceylon ..	0 2	0 1	0 2

The address is free.

Foreign Tariff.—The charges for foreign telegrams vary with the countries to which they are addressed. The rates per word for private and state telegrams to all countries in Europe are as follows:—

	Urgent	Ordinary.	Deferred.	State.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
All countries in Europe (except Germany) *via* Eastern	3 12	1 4	0 10	0 10
Germany *via* Eastern-London ..	4 8	1 8	0 12	0 14

Growth of Telegraphs.—At the end of 1897-98 there were 50,305 miles of line and 155,088 miles of wire and cable, as compared with 387,169 wire including: cable and 89,610 line including cable miles, respectively, on the 31st March 1921. The numbers of departmental telegraph offices were 257 and 184, respectively, while the number of telegraph offices worked by the Post Office rose from 1,634 to 3,400. The increase in the number of paid telegrams dealt with is shown by the following figures:—

		1897-98.	1920-21.
Inland ..	Private ..	4,107,270	14,607,259
	State ..	860,382	1,428,987
	Press ..	35,910	262,271
Foreign ..	Private ..	735,679	2,656,654
	State ..	9,896	173,796
	Press ..	5,278	25,814
		5,754,415	19,054,781

The outturn of the workshops during 1920-21 represented a total value of Rs. 31,19,200. At the end of the year the total staff numbered 13,443. The total capital expenditure up to the close of 1920-21 amounted to Rs. 16,06,50,031. The net revenue for the year was Rs. 81,78,879.

Wireless.—The total number of wireless telegraph stations open at the end of 1920-21 was twenty, *viz.*, Port Blair, Rangoon, Diamond Island, Table Island, Victoria Point, Madras, Bombay, Sandheads, Calcutta, Karachi, Delhi, Jutogh, Allahabad, Lahore, Nagpur, Peshawar, Quetta, Secunderabad, Maymyo and Mhow, but of these, only Port Blair, Diamond Island, Table Island, Victoria Point and Sandheads book telegrams direct from the public.

Telephones.—On the 31st March 1921 the number of telephone exchanges established by the Department was 255 with 10,703 connections. Of these exchanges, 109 were worked departmentally. The number of telephone exchanges established by Telephone Companies was 11 with 20,335 connections.

The Botanical Survey is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the department by forest officers and others. Over 2,000 specimens were obtained in 1911-12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

Geological Survey.—The first object of the Department is the preparation of a general geological map of India. Various economic investigations, which form an increasingly important part of the Department's work, are also conducted. These include investigation of marble and sandstone quarries for the purpose of building Imperial Delhi, the examination of the Korea coal-field in the Central Provinces, of petroliferous localities in the Punjab and North-West Frontier Province, of pitchblende areas in the Gaya District, &c.

Zoological Survey.—A scheme for the formation of a Zoological Survey on the basis of the Zoological and Anthropological Section of the Indian Museum, Calcutta, came into force in July, 1916. The proposals as sanctioned by the Secretary of State mainly are as follows:—The headquarters of the Survey will be the Indian Museum. The scheme regarding the Zoological Survey entails the breaking up of the organisation now known as the Zoological and Anthropological Section of the Indian Museum into two parts, one of which will become a Government department under the title of the Zoological Survey of India, and will be primarily concerned with zoological investigation and exercise such advisory functions as may be assigned to it by Government, while the other part will remain as the office of the Trustees of the Indian Museum and will be organised for the present on the lines laid down in the existing by-laws of the Museum. It will be the duty of the Zoological Survey to act as guardians of the standard zoological collection of the Indian Empire, and as such to give every assistance in their power both to officials and to others, in the identification of zoological specimens submitted to them, arranging, if requested to do so, to send collections to specialists abroad for identification in cases in which no specialist is available in India. The Director of the Survey is Dr. Anandale.

Mammal Survey.—The Survey was instituted in the year 1912 with the object of making as complete a study as possible of the occurrence and distribution of Mammals in India, Burma and Ceylon, and with the further object of supplementing the collection of Indian Mammals at the Bombay Natural History Society's Museum and at the British Museum as well as at the Natural History Museums in India, the primary object of the Survey being the furtherance of our knowledge of Indian Mammalian Fauna. Up to 1891 Naturalists in India had to rely for information on Dr. Jerdon's "Mammals of India" published in 1874. In 1884 R. A. Sterndale published his Natural History of Indian Mammals a purely popular work which did not add much to Jerdon's book. In 1881 a memorial prepared by Dr. Sclater, Hon. Secretary to the Zoological Society and signed by Darwin, Hooker, Huxley, and other well known scientists, was presented to the Secretary of State for India. The memorial recommended that a series of Volumes dealing with the Fauna of India should be prepared and Dr. Blanford should be appointed its Editor. The memorial resulted in the publication in 1888-1890 of the Volume on Mammals in the "Fauna of British India" Series and since 1891 this volume has been the standard work on *Indian Mammals*. Blanford's book was however based on the information then available and the shortcomings of the book have been revealed in the light of more recent research. Further knowledge in regard to distribution and classification and the discoveries of new species have rendered Blanford practically obsolete.

To remedy this defect, at the instigation of the authorities of the British Museum, the Bombay Natural History Society decided to institute what is now known as the Mammal Survey. Mr. W. S. Millard, then Hon. Secretary of that Society, issued in an appeal to its members to enable the Society to engage the services of trained European collectors so as to make a systematic collection of the mammals of India, Burma and Ceylon. The response to the appeal resulted in over a lakh of rupees being raised between 1911 and 1920, partly by subscriptions from the Society's members, contributions from Indian Princes, and grants from the Indian Government, the Government of Burma, Ceylon, Malay States, and the Provincial Governments. Subscriptions were also received from a few Learned Societies and Institutions in England and America. By the outbreak of the war the Survey had been carried on over large areas of the country, the districts covered being—In Western India a portion of Sind, the whole of Gujarat, Kutch and Kathiawar; the Southern Maharatta country and Kanara in Southern India; in Coorg and Mysore; in the centre large tracts of the Central Provinces and some districts of Bengal and Behar; in Northern India the Society's collectors had worked over Kumaun, Darjeeling and Sikkim and the Bhutan Duars. In Burma, collections were made along the Chindwin river, in Central Burma and in the Shan States, Pegu and a portion of Tenasserim. The whole of Ceylon was also systematically surveyed.

The material, which up to the outbreak of War comprised some 17,000 specimens, was forwarded to the British Museum where the collections were scientifically worked out by the late Mr. R. C. Wroughton, formerly Inspector General of Forests, Mr. Oldfield Thomas, F.R.S., Curator of Mammals at the British Museum, Mr. Martin C. Hinton and others. The results of their researches were published in a series of scientific papers in the Journal of the Bombay Natural History Society. The enormous mass of material then collected resulted in the discovery of large numbers of new forms and species and by increasing our knowledge of the distribution of Indian Mammalia has enabled the revision of Blanford's Mammalia to be undertaken and early in 1921 the Secretary of

State for India commissioned Mr R. C Wroughton, since deceased, and Mr. M. C. Hinton to undertake the work.

At the beginning of the War certain important areas however remained to be worked, principally S. India, the Eastern Ghats, the Central Indian states and certain portions of Burma and the Mergui Archipelago. So when demobilisation rendered it possible the work of the Survey which had been in abeyance during the War was resumed and a collector was first sent to Assam which has now been thoroughly worked. The Bombay Natural History Society's collectors are now in the Eastern Ghats and in Mergui, and it is hoped, if sufficient funds are forthcoming, to complete the work as originally conceived.

The Board of Scientific Advice.—This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done.

The Secretary to the Government of India (Department of Revenue and Agriculture) is *ex-officio* President of the Board which includes the Director-General of Observatories, the Director of the Zoological Survey the Surveyor-General of India, the Principal Punjab Veterinary College, the Director of the Indian Institute of Science, the Inspector General of Forests, the Agricultural Adviser to the Government of India, the Director of the Geological Survey, the Director-General, Indian Medical Service, the Secretary to the Government of India, Public Works Department, and the Director of the Botanical Survey of India, who is Secretary to the Board of Scientific Advice.

The Programme of the scientific departments for 1919-20 includes the following. The Meteorological department will organise upper air observatories in various places in connexion with the proposed air services. The Kodaikanal Observatory will investigate the displacement of solar lines, the spectrum of Venus, and solar rotation. The Survey of India expects to commence meteorological work and will continue its magnetic work. The Geological Survey of Bihar, Orissa, the Central Provinces and Burma will be continued and enquiries into Wolfram and tin in Tenasserim, Sulphur and Chromite in Baluchistan and Seistan and Mica in Bihar and Orissa will be taken up, and research made into Gondwana fossil plants and fossils from Sind, Baluchistan, the North-West Himalayas and Burma. From shortage of staff the work of the Botanical and Zoological Surveys will be much curtailed but it is hoped that Cinchona work will be extended and that the survey of the fresh water molluscs of India and the investigation of the Chilka Lake fishes and Indian Diptera will be continued. Under Forestry the technical and physical properties and the actual and potential uses of Indian timber for numerous purposes, the antiseptic treatment of timber, material for paper pulp, fibres, gums, oleo-resins, the fungal diseases and insect pests of forest trees, the culture of various species of trees of economic importance, and the chemistry of various forest products will form subjects for investigation. Under Agriculture, the chemical investigation of drainage water from fallow and cropped soils, of alkali soils, of green manures, of "windrowing" on sugarcane; the botanical study of wheat, tobacco, fibre plants, cotton, indigo, fodder crops and fruit; the fungal diseases of jute, sugarcane, rice, rubber, etc.; the insect pests of sugar, rice, cotton, fruit trees, and stored gram, insect control and the bionomics of blood sucking insects, the bacteriology of Indian soils, the bacteriology and chemistry of Indigo, experimental work in practical agriculture and the diseases of farm stock, will be the chief subjects of investigation.

The Indian Research Fund.—Scientific research work is rapidly developing in India. In 1911 the sum of 5 lakhs (£33,000) out of the surplus opium revenue was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute, at Kasauli. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been undertaken. Its objects are defined as "the prosecution and assistance of research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases." Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the Fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India. A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911-12. It has been decided to devote to research and anti-malarial projects 5 lakhs (£33,000) a year from Imperial revenue commencing in 1913-14. A new periodical "The Indian Journal of Medical Research," was instituted in 1913 and is published four times annually, as the official organ of the Research Fund. The journal deals with every branch of research directly or indirectly connected with medical and sanitary science, and forms a record of what is being done in India for the advance of this work. For the year 1917-18 the Board recommended the continuance on the existing lines of the following inquiries:—Beri Beri by Lieutenant-Colonel McCarrison; Leprosy by Dr. Sudhamoy Ghosh; Hook-worm by Dr. K. S. Mhaskar; Plague Prevention by Dr. G. D. Chitre; Entomological by Mr. Awati and Mr. Mitter. A grant has been made to Lieut.-Col. Glen Liston for experiments with hydro-cyanic acid gas as a disinfectant.

Survey of India.—The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral

surveys are now carried out by the Provincial Land Records and Settlement Departments.

In 1904 attention was drawn to the defective state of the **topographical survey maps,** and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the maps of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient for reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the ½-inch scale employed for waste and barren tracts.

Indian Science Congress.

The Indian Science Congress was founded largely owing to the efforts of Dr. J. L. Simonsen and Mr. P. S. Macmahon, the present Honorary General Secretaries of the Congress. The Asiatic Society of Bengal undertakes the management of the Congress finances and publishes annually the Proceedings of the Congress. The objects are (1) to encourage research and to make the results generally known among science workers in India, (2) to give opportunities for personal intercourse and scientific companionship and thus to overcome to some extent one of the chief drawbacks in the life of workers in science in India, (3) to promote public interest in science; for this end the Congress is held at different centres annually, and evening lectures open to the public form an important part of the proceedings of each Congress.

The Congress meets in January each year, the proceedings last for six days. The Head of the Local Government is Patron of the Congress: the Congress session is opened by a Presidential Address delivered for the President for the year. The President is chosen annually, the different sections being represented in turn. The sections are (1) Agriculture, (2) Physics and Mathematics, (3) Chemistry, and Applied Botany (4) Zoology and Ethnography, (5) Botany, (6) Geology, (7) Medical Research. When the sections meet separately each section is presided over by its own President also chosen annually. The mornings are devoted to the reading and discussion of the papers, the afternoons to social functions and visits to places of interests; in the evenings public lectures are delivered.

Government officers whose services can be spared will be granted special leave to attend the Congress and can recover, through the usual channels, the actual train fare paid by them to and from the Congress—(*See* Circular Letter from the Government of India, Department of Revenue and Agriculture (General) No. 10171, dated 17th August 1916, embodied in Bombay Government, Education Department, Order No. 2324, dated 14th September 1916).

THE IMPERIAL INSTITUTE.

The Imperial Institute, South Kensington, has been placed by the Imperial Institute (Management) Act of 1916 under the control of the Secretary of State for the Colonies as representing the central authority for the Dominions, Colonies, and Protectorates of the Empire. The actual management of the Institute will be with an executive council of twenty-five members, which, subject to the general control of the Secretary of State for the Colonies, will possess considerable autonomy and will be the governing body of the Institute. India is to be represented on this council by four members, one nominated by the Government of India, two by the Secretary of State for India, and one by the Secretary of State for the Colonies. In addition, it is understood that there will be a special Indian Committee of the Council with co-opted members—an arrangement which will greatly increase the connection of the Institute with Indian interests, and, it is hoped, will promote the development of those activities of the Institute for India which are most needed in England.

An account of the work done by the Institute for India, by Dr. W. R. Dunstan, Director of the Imperial Institute, has lately been published in the *Bulletin* of the Institute.

The **Indian Collections** of the Imperial Institute, which have been completely reorganised in recent years, constitute the Indian Section of the Public Exhibition Galleries. They include a representation of the important raw materials of India, illustrations of its chief industries and their results, tabular information and diagrams respecting Indian trade and commerce, maps, pictures, and photographs of its cities and industries.

Technical Information Bureau.—Ever since the Scientific and Technical Research Department was started, a most important part of its work has been, in addition to conducting researches, to collect and critically collate all published information respecting the production and industrial uses of raw materials, and it has gradually come to be recognized as a central clearing-house for information of this character. Merchants and manufacturers in England, as well as producers in India and the Colonies, have applied in increasing numbers for information on these subjects. In order to be in a position to deal more effectively with such enquiries, a special branch of the department was formed in 1914, whose business it is, in collaboration with the staff of the Scientific and Technical Research Department, to collect and distribute technical information. Since the war this branch, known as the Technical Information Bureau, has been very full of work, and has not only dealt with a large number of inquiries as to Indian materials and their possibilities, but has taken the initiative with British manufacturers and merchants in bringing to their notice important Indian materials which await a new market.

The Institute has a library and map rooms which are important auxiliaries to this work and publishes quarterly the *Bulletin* which has played a conspicuous part in making known throughout the Empire the results of researches conducted at the Institute, and the records of progress in the various aspects of the production and utilisation of commercial and economic materials.

The Public Trustee.

The **Public Trustee of England** is a Government Official created by Statute (Public Trustee Act, 1906), whereby the State acts as an executor or as a trustee under Wills, and as a trustee under Settlements, whether these instruments are new or old, and in other offices of an analogous character.

The office has been a great success; in the seven years that it has been open the value of the trusts in course of administration have amounted, in round figures, to £50,000,000, while the estimated value of Wills lodged in the Department which have yet to mature is put at some £59,000,000, showing a total value of business of all kinds negotiated at £110,000,000.

Fees chargeable.—The office is now entirely self-supporting and is no charge upon the tax-payer. A provision of the Statute declares that the Office is to make no profit but to charge only such fees as may provide the working expenses and constitute a reserve fund against the liabilities assumed by the State for breach of trust. In accordance with this mutual principle the fees have already been reduced from their original scale, and the cash surplus of fees over expenses, regarded as the nucleus of a reserve fund for all contingencies, is now £14,585.

The main fees are of two kinds—a fee on capital and a fee on income. The fees on capital are taken in two instalments—an instalment of half taken at the beginning, and another instalment of half taken at the end of a trust—each instalment being calculated at the following rates:—

On the first £1,000, fifteen shillings per cent.

On the excess of £1,000 to £20,000, five shillings per cent.

On the excess of £20,000 to £50,000, two shillings and six pence per cent.

On the excess of £50,000, one shilling and three pences per cent. The **Fee on income** is one per cent. if, as is usual, the income be paid direct from its source to the person entitled, on any income in excess of £2,000 a year the fee is only ½ per cent. Where the income is paid through the Department then the fee is two per cent. up to £500 a year, and one per cent. on any excess of £500 a year, and ½ per cent. on income in excess of £2,000 a year. The fee on investment is ¼ per cent.; the Public Trustee, out of this fee paying the brokerage. There is power to vary these fees to meet the peculiar circumstances of special cases; but owing to the low range of the fees, and their mutual character the power of reduction is but seldom exercised, except perhaps in the case of large trusts.

The Department has been organised upon lines followed by commercial organisations. Forms are avoided wherever possible, the methods of the Office prescribing prompt attention to all matters within the day.

The particulars of any trust in which it is desired that the Public Trustee should act may be brought to his notice by letter or by personal interview, and upon his assent being obtained, his appointment should be effected in the ordinary way as in the case of private trustees. In the case of a Will about to be made, his appointment can be secured by the simple provision "I appoint the Public Trustee of England as the executor and trustee of this my Will."

One of the forms of trusteeship which would appeal to English people residing in India is a scheme known as a "**Declaration of Trust.**" An official pamphlet explains that the Public Trustee's services have been requested by people who, either because of professional or business pre-occupation, or from want of experience in dealing with money matters, or from the disadvantages which might attach to Governmental, professional or business disabilities abroad, are not well placed to select and supervise their investments. It would appear that the services of the Department in this matter were first requisitioned by officers taking up appointments in India; and, following out their request for individual assistance, this scheme of trust came to be devised, and has been found to commend itself to the circumstances of a very large circle of persons similarly disadvantaged. A Declaration of Trust is an **inexpensive form of trusteeship** by virtue of which the owner practically retains full control over his capital. The property is made over to the Public Trustee either in the form of money to be invested or specific securities transferred into his name; and thereupon the Public Trustee executes a short "declaration" setting out that he holds the money invested or the securities in trust for the transferor. The result of this is that income, as it accrues, is paid to the owner or to any beneficiary as he may direct. A wide field of investment is permissible, as the trust provides that the funds may be invested as the owner may from time to time direct. As the pamphlet sets out interest at the rate of at least 4 per cent. is to be looked for under the scheme from investments of a non-speculative character. It should be understood that this form of trusteeship is not analogous to a bank deposit, where the return of the capital at par, given the solvency of the bank, is expected. Investments are selected with the greatest care in consultation with the owner, but it must be understood that the Public Trustee does not accept responsibility for any fluctuation of any of the investments chosen. The fees payable for this scheme of trusteeship, so far as the capital fees are concerned, are half those payable in the case of an ordinary settlement. The other fees are the same as the ordinary fees.

The appointment of the Public Trustee secures certain definite advantages inasmuch as he is by Act of Parliament a Corporation Sole: and thus it is said the Public Trustee never dies, so that the expense of appointment of other Trustees is permanently avoided. His

integrity is guaranteed by the State, while the measure of his success would indicate that he is necessarily experienced and skilled in his duties.

Close personal attention is given by the Public Trustee and his senior officers to the details of every trust; and as regards the work of investment, a large organisation has been set up to give the best consideration not only to the selection of investments but to the duty of keeping them under frequent observation.

An Advisory Committee of men of recognised authority has, in the past year, been appointed by the Lord Chancellor to assist the Public Trustee by a quarterly review of the investments made. In the last Annual Report the Public Trustee speaks of having secured a return of £3-19-4 per cent. upon his trustee investments and a return of £4-10-1 per cent. upon his non-trustee investments.

The success of the Department would seem to show that there is a widespread public need in England for such an Office, and the energy and efficiency with which the Department has been constituted and conducted has been a great factor in commending it to the public. The State Guarantee is also doubtless a factor of great importance. A statutory rule provides that strict secrecy shall be observed in respect of all trusts administered in the Department.

The administration is subject to an **audit** by the Controller and Auditor-General (the Government Auditor), while the internal organisation has been built up upon the principle of a check and counter-check upon the administration.

An important section of the Statute gives the Public Trustee power to direct an audit and investigation of the condition and accounts of any trust.

Officials in India will doubtless tend to make an increasing use of the Department. As a Government Office, its stability will commend itself to them as a medium to safeguard their interests under Wills or Settlements which can be entirely relied upon, and free from the risks and expense attendant upon any other forms of trusteeship.

Further information upon details and copies of the official pamphlet, reports and rules, etc., can be obtained of the official agents to the Department, *viz* :—Messrs. King, Hamilton & Co., Calcutta and in Bombay, Messrs. King, King & Co., whose head office is Messrs. Henry S. King & Co., 65, Cornhill, London, E. C.

THE ADMINISTRATOR-GENERAL.

In India the functions of a Public Trustee are divided in each Province between two officials, the Administrator-General and the Official Trustee.

The office of **Administrator-General** was first constituted by Indian Act VII of 1849. There were several later enactments on the subject, all of which have ceased to be in force. The present law is to be found in Indian Act III of 1913, which contains the following provisions :—There are three Administrators-General in each of the Presidencies of Bengal, Madras, and Bombay. Their combined jurisdiction covers the whole of British India. The Administrator-General is entitled to letters of administration, when granted by a High Court, unless they are granted to the next of kin. In the other Courts he is entitled to letters in preference to a creditor, a legatee other than a universal legatee, or a friend of the deceased.

If any person who is not an Indian Christian, a Hindu, Mohammedan, Persian, Buddhist dies leaving w thin any Presidency assets exceeding the value of Rs. 1,000 and if no person to whom any Court would have jurisdiction to commit administration of such assets has, within one month from his death, applied in such Presidency for probate or letters of administration, the Administrator-General is required to apply for letters of administration. In case of apprehended danger of misappropriation, deterioration, or waste of assets left by the deceased in the towns of Calcutta, Madras, and Bombay, the High Courts may direct the Administrator-General to apply for letters of administration. He can also be required to collect and hold assets until a right of succession or administration is determined. Probate and letters of administration granted to an Administrator-General have effect throughout the Presidency, but the High Court can direct that they have effect throughout one or more of the other Presidencies. A private executor or administrator may with the assent of the Administrator-General transfer the assets of the estate to the Administrator-General. There are provisions in the Act with regard to the revocation of grants and the distribution of assets When the assets do not exceed Rs. 1,000 in value, the Administrator-General may, when no probate or letters of administration have been granted, give a certificate to a person, claiming otherwise than as a creditor to be interested in such assets, entitling him to receive the assets. There is also power in certain events to give such certificate to a creditor. There is a further power to send the residue of the assets to the country of domicile of the deceased. The Government of India is required by the Act to make good all sums for which the Administrator-General would be personally liable if he had been a private administrator, except where the Administrator-General and his officers have in no way contributed to the liability.

Fees both on capital and on income are payable out of the estates taken charge of by the Administrator-General. The fees on capital vary from 3 per cent. on the gross value in the case of small estates to 2 per cent. in the case of large estates. The fees on income vary in the case of moveable property from 2 per cent. to 3 per cent., and in the case of immovable property from 3 per cent. to 5 per cent. When the Court has directed the Administrator-General to collect and hold the assets a fee of 1 per cent. on the value of the assets taken possession of, collected, realised, or sold is payable. A small fee is also payable in cases where the

Administrator-General grants a certificate the Administrator has power to reduce the fees to one-half.

Official Trustee.—The office of Official Trustee dates from the year 1843. By Indian Act XVII of that year the Supreme Court had power to appoint the Registrar or other officer of the Court to be a trustee, where there was no trustee willing to act. Act XVII of 1843 was repealed by Act XVII of 1864, which was in its turn repealed by Act II of 1913, which contains the present law on the subject. There are three Official Trustees. The Official Trustee of Bengal has powers in the greater part of India. The powers of the Official Trustee of Bombay extend to the Bombay Presidency and the Province of British Baluchistan; those of the Official Trustee of Madras extend to the Madras Presidency and the Province of Coorg. The Government can appoint Deputy Official Trustees.

An Official Trustee can (*a*) act as an ordinary trustee, (*b*) be appointed trustee by a Court of competent jurisdiction. He has, except as otherwise provided, the same powers, duties, and liabilities as ordinary trustees. He may decline any trust. He may not accept any trust under any composition or scheme of arrangement for the benefit of creditors, nor of any estate known or believed by him to be insolvent. He cannot accept a trust for a religious purpose, or for the management or carrying on of any business. He cannot administer the estate of a deceased person unless he be sole executor and sole trustee under the will. He cannot be appointed trustee along with any other person. With his consent he may be appointed trustee in the instrument making the trust, and he may accept a trust contained in a will. When property is subject to a trust, and there is no trustee within the jurisdiction willing or capable to act, the High Court may appoint the Official Trustee as trustee. He may also be appointed a trustee by the surviving or continuing trustees of a trust, and all persons beneficially interested therein.

As in the case of an Administrator-General, the Government of India is responsible for the acts or defaults of an Official Trustee. Fees are payable at rates fixed by the Government.

PROVING OF WILLS.

In British India if a person has been appointed executor of the will of a deceased person, it is always advisable to prove the will as early as possible. If the will is in a vernacular it has to be officially translated into English. A petition is then prepared praying for the grant of probate of the will. All the property left by the deceased has to be disclosed in a schedule to be annexed to the petition. The values of immoveable properties are usually assessed at 16⅔ years purchase on the nett Municipal assessment. For estate under Rs. 10,000 the probate duty payable is 2%; between Rs. 10,000 and Rs. 50,000 the duty payable is 2½%. Over 50,000 rupees the duty payable is 3%. In determining the amount of the value of the estate for the purposes of probate duty the following items are allowed to be deducted:—

1. Debts left by the deceased including mortgage encumbrances.
2. The amount of funeral expenses.
3. Property held by the deceased in trust and not beneficially or with general power to confer a beneficial interest.

The particulars of all these items have to be stated in a separate schedule. It is the practice of the High Court to send a copy of these schedules to the Revenue authorities and if the properties particularly immoveable properties have not been properly valued, the Revenue department require the petition to be amended accordingly. In certain cases the Court then requires citations to be published and served on such persons as the Court thinks are interested in the question of the grant of probate. If no objection is lodged by any person so interested within 14 days after the publication or service of citation and if the will is shown to have been properly executed and the petitioner entitled to probate, probate is ordered to be granted.

Labour.

Labour in India was not organised until recently and the movement may be said to date from 1920 the year too of the first meeting of the All-India Trade Union Congress in Bombay.

Industrial Disputes.—There was an exceptionally long period of strikes throughout the country in 1921. The detailed statistics for the whole period are not yet available, but those for the Bombay Presidency from 1st April 1921 may be summarised as follows:—

Month.	No. of strikes and lockouts	Aggregate duration in working days.	Proportion settled.			
			In favour of employers (Per cent).	In favour of employees (Per cent).	Compromised (Per cent.)	In progress (Per cent).
1921.						
April	6	181,450	33	17	17	33
May	11	227,115	27	9	18	46
June	10	79,801	70	10	..	20
July	10	12,268	60	10	10	20
August	14	192,001	36	36	7	21
September	21	256,498	80	10	..	10
October	15	231,896	27	13	27	33
November	31	62,009	29	42	19	10
December	9	26,321	78	11	11	..

Trade Unions.—In regard to Trade Unions, the Government of India have addressed Local Governments with a view to legislation on the Registration and Protection of Trade Unions throughout India. This Act will, it is hoped, be passed in the autumn session of the Central Legislature this year, or in the coming cold whether session. The All India Trade Union Congress held its second session at Jharia on the 30th November and continued its sittings on the 1st and 2nd of December, at which representatives from almost all the provinces were present. Mr. Joseph Baptista of Bombay who was elected President delivered an address in the course of which he suggested that Government should establish a Ministry of Labour. He outlined the constitution of the congress and hopes that it would develop into a national organ of labour, in which the Co-operative, Trade Union, and Socialistic movements would be represented.

Industrial Peace.—During the year as is to be expected with the existence of strikes, serious attempts were made by Government and employers and also by members of the general public to arrive at some solution for the prevention and early settlement of industrial disputes. A committee sat in Calcutta and presented a report. This has resulted in the formation of Conciliation Boards but no legislation has been passed with regard to this. At the present moment a strong non-official committee under the presidentship of Sir Stanley Reed is sitting in Bombay to arrive at a solution for the prevention and early settlement of industrial disputes in this presidency.

The Committee is exploring all the possible ways and means suitable to the peculiar conditions of India, at any rate of this Presidency, by which strikes would be prevented or settled with the least possible delay. The Committee was appointed on the acceptance by the Government of a Resolution moved in the Legislative Council in October 1921 by Mr. Kanji Dwarkadas, M.L.C.

Workmen's Compensation.—The question of Workmen's Compensation Act on the lines of the English Legislation is at present under consideration and the Workmen's Compensation Act, will, it is understood, be on the Statute Book in the near future. The Local Governments have been consulted on the following points:—

(1) Is it desirable to affirm in general terms the principle of employers' liability?

(2) If so, should the necessary legislation follow the English Employers Liability Act of 1880 and the Workmen's Compensation Act of 1906?

(3) Should there be provision for compensatory benefits and should this be limited to industrial workers ?

(4) What provisions should regulate the inclusion of workers in.—

(*a*) Factories,

(*b*) Mines,

(*c*) Railways,

(*d*) Ships,

(*e*) Docks ?

(5) Is the principle of limitation to manual workers as a general rule approved ?

(6) Should the compensatory provisions cover.—

(*a*) Building trades,

(*b*) Telegraph, and telephone services ?

(7) What further classes should be included ; are there any dangerous or unhealthy trades for which provision should be specially made ?

(8) What should be the necessary circumstances antecedent to the injury to bring it within the scope of the Act ?

(9) What exceptions should be made in this connection ?

(10) For what injuries should compensation be provided ?

(11) How should the cost of compensation be met ?

(12) What type of scales should be adopted for compensation ?

(13) Should the award of lump sums be avoided ?

(14) Are the scales suggested suitable ?

(15) Is the principle of special scales for minors approved ?

(16) Should refusal to receive medical attention debar an employee from claiming compensation ?

(17) How should the Act be administered ?

(18) Should special penalties be provided for deliberate evasion of the Act ?

General.—The question of forming Employment Agencies is also under consideration. During the year Labour Offices were in existence in Bombay and in Madras. It is under stood that the Government of Bengal are shortly to appoint a Labour Officer in the Secretariat.

THE LABOUR OFFICE.

"More than 30 years ago," His Excellency the Governor of Bombay said in a foreword to the first (September) issue of the *Labour Gazette*, "it was decided in the House of Commons that immediate steps should be taken to ensure the collection in England of full and accurate statistics in regard to Labour matters. In India on the other hand the importance of such statistics to industry and labour has been realised less rapidly and the compilation of labour statistics as such was until recently still in its infancy. . . To prevent these misunderstandings between employer and employed and between both of these and the general public, as well as to provide Government with reliable data my Government decided that a Labour Office must be instituted and this decision was carried into effect in April last (1921)". His Excellency pointed out that the Labour Office is intended to furnish up-to-date and accurate information regarding the realities of the labour world. This was the primary function of the Labour Office as of Labour Departments the world over.

In a resolution of Government in the Home Department dated 29th April 1921, the functions of the Labour Office were set out as follows :—

(*i*) LABOUR STATISTICS AND INTELLIGENCE. —These relate to the conditions under which labour works and include information relating to the cost of living, wages, hours of labour, family budgets, strikes and lock-outs, and similar matters ;

(*ii*) INDUSTRIAL DISPUTES.—As experience and knowledge are gained and the activities of the Labour Office develop, it will promote the settlement of industrial disputes when these arise ; and

(*iii*) LEGISLATION AND OTHER MATTERS RELATING TO LABOUR.—The Labour Office will advise Government from time to time as regards necessary new legislation or the amendment of existing laws. Legislation, it may be noted, in regard to (1) the registration and protection of trade unions ; (2) Workmen's Compensation ; (3) Unemployment agencies ; and (4) a new Factory Act is under consideration.

PERSONNEL.

DIRECTOR —Mr. G. Findlay Shirras, M.A., F.S.S., (Hony) I.E.S., M.L.C.

INVESTIGATORS —Mr. W. J. Herridge, Rao Sahib M.M Gandhi, B.Sc. ; Miss G. Pimpalkhare.

JUNIOR AND PART TIME INVESTIGATORS.— Miss S. Dabholkar, Miss B. Desai, Mr. S. A. Jakhi, Dr. (Mrs.) F. D. Barnes, M.D., Women's Medical Service (lent for one year by the Dufferin Fund for invetigations regarding maternity benefits and child welfare in connexion with organised industries of the Presidency.)

(*iv*) LABOUR Gazette.— A *Labour Gazette* is published monthly. It is a journal for the use of all interested in obtaining prompt and accurate information on matters specially affecting labour. It is intended to stand to labour questions here in the same relation as the "Labour Gazettes" and "Labour Reviews" of Departments of Labour in other countries, Statistical and other information on the cost of living, wholesale and retail price levels, wages and the hours of labour, industrial disputes trade unions, etc., is regularly published.

Enquiries, &c.—These should be addressed to the Director, Labour Office, Secretariat, Bombay. The Telegraphic address is :— "BOMLABOUR".

Addresses.

EMPLOYERS' ASSOCIATIONS.

BOMBAY MILLOWNERS' ASSOCIATION.

Secretary,—C. B. Sayer,
Graham's Buildings,
Parsee Bazar Street, Fort,
Bombay.

AHMEDABAD MILLOWNERS' ASSOCIATION.

Honorary Secretaries {Goverdhan I. Patel,
{Pestanshah N. Vakil,
Millowners' Association Rooms,
Din Bag, Mirzapur Road,
Ahmedabad.

BOMBAY ENGINEERING EMPLOYERS' FEDERATION.

Honorary Secretary—N. Medley,
Agent's Office, B. B. & C.I. Railway.

BOMBAY CHAMBER OF COMMERCE,

Secretary,—C. B. Sayer,
Graham's Buildings,
Parsee Bazar Street, Fort,
Bombay.

KARACHI CHAMBEER OF COMMERCE.

Secretary—Alan Duguid,
Karachi.

LABOUR ASSOCIATIONS.

ALL-INDIA TRADE UNION CONGRESS.

President—Joseph Baptista, B.A., LL.B., Bar.-at-Law,
7 A, Fort Street, Fort, Bombay.

General Secretary—D. Chaman Lall,
7 A, Fort Street, Fort, Bombay.

BOMBAY CENTRAL LABOUR FEDERATION.

President—Joseph Baptista, B.A., LL.B., Bar.-at-Law,
7 A, Fort Street, Fort, Bombay.

Secretary—D. Chaman Lal.
7 A, Fort Street, Fort, Bombay.

CENTRAL LABOUR BOARD.

Secretary—S. H. Jhabwala,
123, Esplanade Road, Fort,
Bombay.

Bombay Development Scheme.

The Bombay Development Scheme in its widest sense represents concerted attempts by the three local bodies, the Municipality, the City Improvement Trust and the Port Trust, each working in its own sphere, and by the Government, to secure the rapid and adequate development of the city.

The Municipality is developing various areas in the city which will result in providing increased residential and business accommodation. The Mahim scheme will provide two main avenues running north to south, in addition to the 60 feet road from Worli to Mahim Bazar, now practically completed, and a large number of cross roads. It aims at the development of an area in which it may be possible to house, approximately, a population of 2,50,000. Provision has been made for a central park with a frontage on the bay and for a smaller park near the southern end of the area. The main contribution of the Municipality, however, towards the general development scheme lies in the great water and drainage projects which it is undertaking and which are essential for the health and well-being of the city.

Improvement Trust.—The Improvement Trust are developing the north of the Island on a large scale and at a rapid pace, completing their old schemes, Dadar-Matunga and Sion-Matunga, and pressing on with the new schemes, adopted in 1919, the total area of which amounts to about one-ninth of the area of the whole Island. Of the latter, the Worli scheme will provide for three classes of people; the richer class on the sea face, the middle class on the main road, and very large areas for the working classes on the land which is now being reclaimed in the neighbourhood of the mills. At Dharavi the land now occupied by the tanneries and the swamps to the south will be converted into a salubrious garden suburb, including a large amount of accommodation for the working classes. The Sewri-Wadalla scheme is intended almost entirely for the working and lower middle classes, and the area included in it will, when the contemplated railway connections are made, be within easy access by rail from Victoria Terminus.

Port Trust.—The Port Trust is completing the preparation of a scheme for a great expansion of he docks, the new docks to be located on the outh-west corner of Trombay. The construction of the new cotton depot on the Mazgaon Sewri reclamation is being pushed on as rapidly as possible, which will release for other purposes the ground now occupied by the Cotton Green.

Programme.—The works which Government propose to carry out themselves are as follows:—

(*a*) The provision of at least 50,000 one room tenements for the working classes, to meet an actual existing shortage of accommodation as reported by the Municipal Commissioner in 1919.

(*b*) The Back Bay and East Colaba Reclamation, to reduce congestion in the business area and provide residential accommodation and open spaces in the south of the City.

(*c*) The development of South Salsette, including Trombay, partly for residential and partly for industrial purposes.

(*d*) The provision of other industrial areas at greater distances.

(*e*) The improvement of communications to the suburban areas

(*f*) The improvement of the supply and transport of building materials.

The question of special measures for the development of Bombay has been under the consideration of Government for many years. The results of the last general survey of the subject are contained in the report of the Bombay Development Committee submitted in May 1914. The war made it impossible then to carry out any large schemes as to formulate a definite policy. And when the war had come to an end, it was found that owing to the large increase in the City's population during the war, and the high prices of materials, conditions were much worse than before, and that more rapid and more drastic action was necessary.

Scope of Work.—In a speech to the Legislative Council in August 1920, His Excellency the Governor explained that the industrial housing scheme, which Government considered essential, would be carried out by them direct, instead of being entrusted to the Municipality or the Improvement Trust, because of the very heavy liabilities which already rested on those bodies He introduced a Bill for the levy of a cess of one rupee per bale on cotton imported into Bombay, the proceeds of which would be used partly to provide additional revenue for the Municipality in view of its large programme of expenditure, partly to meet the loss anticipated on the housing scheme, and partly to assist development schemes in Salsette.

He announced Government's decision to establish a new Development Department, and Directorate, which would be at once a department of Government, detached as far as possible from the ordinary Secretariat, and an executive organisation, and defined its duties as under:—

(*a*) To carry out the Back Bay Reclamation Scheme and any other reclamation schemes which may be found necessary in or near Bombay City.

(*b*) To undertake the industrial housing scheme of 50,000 one-roomed tenements for the working classes in Bombay.

(*c*) To organise systematically the supply of building materials for its own work and for the works with which it is connected.

(*d*) To take over all questions relating to the acquisition of land in Bombay City and all questions regarding the utilisation of Government land.

(*e*) To carry out large schemes for the systematic development of Salsette.—

(*i*) by town planning schemes to be carried out by local authorities, and

(*ii*) by the purchase of areas outright with a view to resale after development.

(*f*) To secure an adequate water supply for the whole of Salsette when it is developed as an urban area.

(*g*) To deal with the supply and distribution of electrical energy, both for domestic and industrial purposes in the area outside Bombay.

(*h*) To take up the question of the Improvement of communications to link up Bombay City with the areas to be developed in Salsette and Trombay.

He stated also that, in view of the magnitude of the schemes to be undertaken simultaneously by Government and the local bodies, Government had decided that the finance of the whole scheme should be pooled, that they should lend their credit to the local bodies, and appeal to the public for the money required by them as well as by Government themselves. The result of this decision was the Bombay Development Loan of 1920, the subscriptions to which amounted to Rs. 939 lakhs in round figures. Of this amount, Rs. 419½ lakhs were forthwith transferred to the local bodies, further advances being made subsequently.

Personnel.—The whole Development Department, including the Directorate, is in charge of the Hon'ble Sir Chimanlal Setalvad, as General Member of Council. The Director of Development is in charge of the executive organisation and staff, subject to the orders of Government. The Deputy Director, in addition to assisting the Director in executive matters, is Secretary to Government in the Development Department, and also Commissioner for the Bombay Suburban Division, which includes the areas in Salsette and the Ambarnath taluka, in which development schemes are being carried out.

The Back Bay Reclamation works and the East Colaba Reclamation Project are in charge of a Chief Engineer (under the Director), assisted by 3 Deputy Chief Engineers, one at the Quarry near Kandivlee Station from which materials for the wall are being obtained, one at Marine Lines and one at Colaba, at either end of the seawall. This branch is detached from the remainder of the engineering staff.

For development works other than the reclamation, the Director is Chief Engineer, and is assisted by 4 Superintending Engineers. One is in charge of industrial housing, one of development works in Salsette, one of the Salsette Trombay Railway Scheme, and the industrial area beyond Kalyan, and one of questions relating to the supply and transport of materials.

The appointment of Salsette Development Officer, created many years ago, has been absorbed in the Directorate, and the holder of it is also Collector of the Suburban District, and in charge of the staff employed on the acquisition of land in the suburban area. There is a Land Manager, who is employed on valuations, the preparation of details of schemes, negotiations with land owners, etc. As the existing land revenue survey is not nearly accurate enough for land to be developed as an urban area, a Superintendent of Suburban survey has been appointed to make a survey on the general lines of the Bombay City survey.

The Government of India have appointed a special Audit Officer for the Bombay Development Scheme, and have authorised his appointment as Deputy Financial Adviser, and the appointment of the Deputy Controller of Currency as Financial Adviser to the Development Department.

Housing— In Bombay City, apart from certain petty schemes affecting Government properties, the work of the Directorate consists at present of industrial housing and the Back Bay Reclamation. Detailed estimates for the East Colaba Reclamation are being prepared, with a view to work being started next cold weather. Three housing schemes are in progress, at Naigaum, DeLisle Road and Worli. Work on the latter two sites has begun only recently, but some of the chawls at Naigaum will be ready shortly On the plot already taken over from the Improvement Trust at Naigaum, 9 chawls are being constructed departmentally and a contract for 10 was let. Another 23 chawls are to be constructed on a second site to be handed over shortly by the Trust. At DeLisle Road 33 chawls are to be constructed At Worli about 68 acres of the land recently reclaimed in the Trust's Worli scheme are being taken over and about 150 chawls in all are to be constructed. All the chawls are to contain 80 tenements.

As regards *Back Bay*, the equipment and preparation of the quarry have been practically completed, there is through railway communication to the Marine Lines Section, the rolling stock has arrived, and the transport of materials will commence shortly. At Marine Lines the railway siding and yard are practically complete, and the construction of the gantry is in progress. Work on the wall has been commenced at Colaba.

Salsette.—In Salsette a large part of the Bandra-Ghodbunder road up to Andheri has been widened, quarrying and reclamation are in progress at Gilbert Hill, Andheri, the roads in Santa Cruz Town Planning Scheme No. I. have been completed, and those in Santa Cruz Scheme No. II, including the road to Juhu island, are in progress. The development scheme at Khar between the proposed Khar station and the sea, and a small scheme at Chapel Road, Bandra, have been worked out in detail. The seprovide for 863 and 166 building plots respectively. Negotiatons are being carried on for settlements with some of the previous owners and with co-operative building societies having special claims, and the balance of the plots will shortly be placed on the market. Only preliminary work has been done on the large scheme, Shahar, for the area lying between the G.I.P. and B. B. & C.I. Railways. Progress here depends on the construction of the Salsette Trombay Railway referred to later.

In Trombay there are 3 large schemes, Trombay North-East is intended to provide for (*a*) a new municipal slaughter house, tanneries, dyeworks and other noxious trades which ought

to be removed from the City; (*b*) a separate area for milch cattle stables; (c) residential areas for the people employed in the tanneries, etc. Trombay North-West is intended to provide a residential area for the lower middle class on good land surrounding on 3 sides the existing Chembur village and extending to the south and east. The development of Trombay West will depend on the detailed proposals of the Port Trust as regards the new docks.

In Trombay North-West, which is intended to be a residential area, the development of a gross area of 570 acres, to provide over 3,100 building plots, has been worked out in detail and is under Government's consideration. Meanwhile arrangements are being made to start work on the new roads in order to open out the area. This new estate will have railway access to Bombay from a new station to be opened temporarily on the Municipal line from Kurla Station. A detailed survey for the conversion of the first part of this line into a regular railway and its extension to Trombay has been carried out by the G.I.P. Railway. Preparations for starting work on the tannery area in Trombay North-West are almost complete.

A survey of the proposed Salsette Trombay Railway to run from Pir Pau to Kurla and then through the Shahar scheme lying between the G.I.P. and B.B. & C.I. Railways to Andheri has been completed. This line is to be used in the first instance as a construction line to enable development to proceed rapidly in central Salsette and Trombay. The earthwork has been commenced at the Andheri end, and a contract has been let for the earthwork from Kurla to Wadavli village in Trombay, south of Chembur.

Industrial Town.—The Ambernath Scheme aims at the provision of a new industrial township with a water supply independent of the Bombay system. About 18 lakhs of square yards of land adjoining the South East line of the G.I.P. Railway near Ambernath station will be available for actual factory sites, and ample land is reserved for housing all persons employed in the factories. The water is to be drawn from the Uhlas river, into which the tail-water of the Andhra Valley Hydro Electric Scheme will presently discharge. A barrage, designed to impound 42 million gallons of water, is being constructed. It has been designed so as, with the river widening works, also in progress, to avoid restricting the river during floods. Filtration works, to filter in the first instance 3 million gallons a day, are in hand. Pumps and a pumping main have been ordered, and the earthwork for the pumping main and work on the reservoirs is about to be started. Two factories are almost completely constructed and a third is well in hand. Electric supply is expected to commence in March or April. Roads connecting the present factories with the existing main road and the railway are practically complete. Surveys are being made for widening and improving the main road to Kalyan and for new approach roads to the area. Sites for housing, for a bazar, for Government buildings have been decided on, the storm water drainage of the area has been designed and details of the sewage system are under consideration. The G.I.P. Railway at the commencement of the scheme provided temporary sidings and a temporary loading siding, and details of the permanent arrangements required are being discussed with the railway authorities.

Supplies.—As regards materials, arrangements are being made wth a group of Indian Companies for the supply of all the cement likely to be required by the Development Directorate for 10 years, the local bodies in Bombay having an option of participating, if they wish to do so. No single source of supply of sand and shingle, in adequate quantities and of suitable qualities, has been found. Additional sidings have been arranged for and are being constructed at Mumbra, the principal place of supply at present Surveys have been made of other sources, and estimates for construction of sidings at the most promising of these are being prepared. An experimental brick-field has been opened at Wasind, mainly as a means of ascertaining what improvements in the manufacture of ordinary bricks are possible and desirable. Railway sidings from Mahaluxmi to the Worli Housing site and from Lower Parel to the De Lisle Road site, for the transport of materials, are being arranged for. A depot has been established and sidings are almost completed at Matunga. These sidings will be used for materials required on development schemes in Bombay not accessible by rail, and facilities will be given to the public engaged in building in the north of the island. A small fleet of steam wagons and trailers has been provided for the transport of materials, and in connection with the proposed development of Salsette and Trombay, small workshops capable of expansion as required are being erected near Kolekalyan and Wadavli near Chembur.

Military Lands—Arrangements have been made with the Government of India involving the relinquishment by the military authorities of practically all the land they hold in the Fort area. The services displaced are to be reinstated partly at Deolali and partly at Colaba, where the military area is to be increased by about 265 acres at the southern end of the Back Bay Reclamation. The Government of India have to pay the Government of Bombay for this land, and this payment and the cost of new buildings, etc., due to the removal of the military from the Fort are to be covered by the sale of the land to be vacated. One small site has been sold and several plots on the Palton Road Estate (formerly the Old Palton Road lines) will be put up for sale at the end of January. Works are in progress at Carnegy Lines and Colaba and tenders have been received for the first of the new works at Deolali. The Bombay Military Lands Scheme is in charge of a Board of Control, consisting of the Director of Development and the General Officer Commanding, Bombay District. The Audit Officer, Bombay Development Scheme, is also Financial Adviser and Audit Officer for the Military Scheme. The staff employed on this scheme do not form part of the Development Directorate, but work in the same building, and in conjunction with the Directorate. As military land becomes ready for disposal, it is handed over by the military authorities to the Bombay Government, and action in regard to its disposal is taken by the Development Directorate under the orders of Government.

Freemasonry in India.

In 1728 a dispensation was granted by the Grand Lodge of England to Geo. Pomfrett, Esq., authorising him to "open a new Lodge in Bengal." Of this personage nothing further is known but under Capt. Farwinter, who in the following year succeeded him as Provincial Grand Master of India, Lodge was established in 1730, which in the Engraved Lists is distinguished by the arms of the East India Company, and is described as "No. 72 at Bengal in the East Indies." The next Provincial Grand Masters were James Dawson and Zech. Gee, who held office in 1740; after whom came the Hon. Roger Drake, appointed 10th April 1755. The last named was Governor of Calcutta at the time of the attack made on the settlement by Surajah Dowlah in 1756. Drake missed the horrors of the Black Hole by escaping and was accused of deserting his post, but, though present at the retaking of Calcutta by Admiral Watson and Clive, it is improbable that he resumed the duties of his masonic office after the calamity that befell the settlement.

The minutes of the Grand Lodge inform us that William Mackett, Provincial Grand Master of Calcutta, was present at the meeting of that body November 17th, 1760, and we learn on the same authority that at the request of the "Lodges in the East Indies" Mr. Cullin Smith was appointed P. G. M. in 1762. At this period it was the custom in Bengal "to elect the Provincial Grand Master annually by the majority of the votes of the members present, from amongst those who passed through the different offices of the (Prov.) Grand Lodge and who had served as Dep. Prov. Grand Master." This annual election as soon as notified to the Grand Lodge of England was confirmed by the Grand Master without its being thought an infringement of his prerogative. In accordance with this practice, Samuel Middleton was elected (P. G. M. circa) in 1767; but in passing it may be briefly observed that a few years previously a kind of roving commission was granted by Earl Ferrars in 1762-64 to John Bluvitt, Commander of the "Admiral Watson," Indiaman "for East India where no other Provincial Lodge is to be found." Middleton's election was confirmed October 31st, 1768, and, as the dispensation forwarded by the Grand Secretary was looked upon as abrogating the practice of annual elections, he accordingly held the office of D. G. M. Unfortunately the records of the P. G. L. date back only to 1774, and thus much valuable information is lost to us. This Grand Lodge continued working until 1792 when it ceased to meet. It seems that the officers were selected from only two Lodges much to the dissatisfaction of the other Lodges, and resulted in most of the dissatisfied bodies seceding and attaching themselves to the Athol of Ancient Grand Lodge. In 1813 at the Union both the Ancients and Moderns in Calcutta combined and gave their allegiance to the **United Grand Lodge of England** and have since been working peaceably under the Provincial Grand Lodge of Bengal which was revived in that year and in 1840 created a District Grand Lodge.

Madras.—The earliest Lodge in Southern India (No. 222) was established in Madras in 1752. Three others were also established about 1766. In the same year Capt. Edmund Pascal was appointed P. G. M. for Madras and its Dependencies and in the following year another Lodge was established at Fort St. George. In 1768 the Athol (or Ancients) invaded this District and in 1782 established a Provincial Grand Lodge and both these Provincial Grand Bodies continued working peaceably side by side until the union. Indeed, though not generally known, these two Grand Bodies made an attempt at coalition long before any such movement was made by their parent bodies, the Grand Lodge of England, and the Ancient Grand Lodge, and Malden in his History of Freemasonry in Madras states that in a great measure they succeeded. At the Union in 1813 all the bodies in Madras gave their allegiance to the United Grand Lodge. One event worthy of note was the initiation in 1776 at Trichinopoly of the eldest son of the Nawab of Arcot, Undat-ul-Amari, who in his reply to the congratulations of the Grand Lodge of England stated "he considered the title of English Mason as one of the most honourable that he possessed." This document is now stored in the archives of the United Grand Lodge.

Bombay.—Two Lodges were established in this Presidency during the 17th century, Nos. 234 at Bombay in 1758 and 569 in Surat in 1798, both of which were carried on the lists until the union when they disappeared. A Provincial Grand Master, James Todd, was appointed but there is no record that he exercised his functions and his name drops out of the Freemasons' Calendar in 1799. In 1801 an Athol Warrant was granted (No 322) to the 78th foot which was engaged in the Maratha War under Sir Arthur Wellesley. In 1818 Lord Moria was asked to constitute a Lodge to be known by the name of St. Andrew by eight Masons residing there and also to grant a dispensation for holding a Provincial Grand Lodge for the purpose of making the Hon. Mountstuart a Mason, he having expressed a wish to that effect. The Petitioners further requested "that his name might be inserted in the body of the warrant, authorising them to instal him after being duly passed and raised a Deputy Grand Master of the Deccan. Of the reply to this application no copy has been preserved. Lodge Benevolence was established in Bombay in 1822.

In 1823 a Military Lodge "Orion-in-the-West" was formed in the Bombay Artillery and installed at Poona as No. 15 of the Coast of Coromandel. It seems from Lane's records that in 1830 it was discovered that this Lodge was not on the records of the United Grand Lodge of England. A Warrant was subsequently issued bearing date 19th July 1833. According to the early proceedings of this Lodge, members were examined in the Third Degree and passed to the chair in the Fourth Degree for which a fee of three gold mohurs was charged. In the following year a second Lodge was established at Poona by the Provincial Grand Lodge of Bengal which however left no trace of its existence. In 1825 the civilian element of "Orion" seceded and formed the "Lodge of Hope" also at Poona No. 802.

Here "Orion" unrecognized at home, aided in the secession of some of its members, who

obtained a warrant, on the recommendation of the parent Lodge, from the Grand Lodge of England. Two years later it was discovered that no notification of the existence of "Orion-in-the-West" had reached England, nor had any fees been received, although these including quarterages had been paid into the Provincial Grand Lodge, Coast of Coromandel. It was further ascertained that in granting a warrant for a Bombay Lodge the Provincial Grand Master of Coromandel had exceeded his powers. Ultimately a new warrant No. 598 was granted as already stated in 1833. Lodge "Perseverance" was started in Bombay No. 818 in 1828. Up to this time the jurisdiction of the Grand Lodge of England in India had not been invaded; but in 1836 Dr. James Burnes was appointed by the Grand Lodge of Scotland, P. G. M. of Western India and its Dependencies. No Provincial Grand Lodge however was formed until 1st January 1838. A second Scottish Province of Eastern India was started which on the retirement of the Marquis of Tweedale was absorbed within the jurisdiction of Dr. Burnes, who in 1846 became Provincial Grand Master for all India (including Aden) but with the proviso, that this appointment was not to act in restraint of any future sub-division of the Presidencies. Burnes may be best described as being in 1836, in ecclesiastical phrase as a Provincial Grand Master "in partibus infidelium" for whatever Lodges then existed throughout the length and breadth of India were strangers to Scottish Masonry. But the times were propitious. There was no English Provincial Grand Lodge in Bombay and the Chevalier Burnes, whom nature had endowed with all the qualities requisite for Masonic Administration, soon got to work and presented such attractions to **Scottish Freemasonry** that the strange sight was witnessed of English Masons deserting their mother Lodges, to such an extent that these fell into abeyance, in order to give support to Lodges newly constituted under the Grand Lodge of Scotland. In one case indeed, a Lodge "Perseverance" under England went over bodily to Scotland, with its name, jewels, furniture, and belongings, and the charge was accepted by Scotland. This Lodge still exists in Bombay and now bears No. 338 on the Register of Scotland. From this period, therefore, Scottish Masonry flourished, and English Masonry declined until the year 1848 when a Lodge St. George No. 807 on the Rolls of the Grand Lodge of England was again formed at Bombay, and for some years was the solitary representative of English Masonry in the Province. In 1844 Burns established a Lodge "Rising Star" at Bombay for the **admission of Indian gentlemen** the result of which is seen at the present day. Thus the seed planted at Trichinopoly in 1776 by the initiation of Andat-ul-Amari has borne fruit, resulting in the initiation of thousands of Indian gentlemen of all castes and creeds, and which has gone far to establishing that mutual trust between West and East, a distinguishing characteristic of Speculative Freemasonry. A Provincial Grand Lodge was re-established in Bombay in 1860, and converted into a District Grand Lodge in 1871.

The Grand Lodge of England.—All three Constitutions of the United Kingdom, the United Grand Lodge of England, the Grand Lodge of Ireland and the Grand Lodge of Scotland hold jurisdiction in India. By far the largest is the first; the next largest is the third and the number of Lodges under Ireland is as yet small. The Grand Lodge of England divides its rule under Five District Grand Masters independent of each other and directly subordinate to the Grand Master of England by whom they are appointed.

Bengal.

80 Lodges. Rt. W. Bro. The Earl of Ronaldshay, G.C.I.E., District Grand Master.

Madras.

31 Lodges. Rt. W. Bro. Hon. L. E. Buckley C.S.I., District Grand Master.

Bombay.

48 Lodges. Rt. W. Bro. W. A. Haig-Brown, J.P., Hon. Mag., District Grand Master.

Punjab.

31 Lodges. Rt. W. Bro. Maj.-Genl. Sir George Fletcher McMunn, K.C.B., K.C.S.I., D.S.O., District Grand Master.

Burma.

14 Lodges. Rt. W. Bro. James McKenna, C.I.E. District Grand Master.

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The Grand Lodge of Scotland exercises its rule through a Grand Master of all Scottish Freemasonry in India, who is elected by the Brethren subject to confirmation by the Grand Master Mason of Scotland. Maj. Gen. W. E. Jennings, C.I.E., the present incumbent of the office, controls 65 Lodges.

The **Grand Lodge of Ireland** granted a warrant to establish a Lodge at Kurnal in 1837, but it was short lived. An attempt was made in 1869 to establish a Lodge in Bombay, but on the representation of the Grand Secretary of England, to the Deputy Grand Secretary of Ireland that it would be objectionable to create a third masonic jurisdiction in the Province, there being two already, *viz.*, English and Scottish, the Grand Lodge of Ireland declined to grant the warrant. In 1911, however, a warrant was sanctioned for the establishment of Lodge "St. Patrick" and since that year two other Lodges have sprung into being.

The Grand Lodge of Ireland has no District Grand Master in India at present, the Lodges corresponding direct with the Grand Lodge in Dublin. There are ten Lodges, 4 in Calcutta, 3 in Ceylon and 3 in Bombay.

Royal Arch Masonry—.Under England, the District Grand Master in any District is nearly always created also Grand Superintendent, his Deputy as Second and another Companion as Third Principal.

Under Ireland there is no local jurisdiction and under Scotland the office is elective subject to confirmation.

The five English Districts are constituted as under:—

Bengal.

27 Chapters. The Earl of Ronaldshay, G.C.I.E., Grand Superintendent.

Madras.

15 Chapters. The Hon. Mr. L. E. Buckley, C.S.I., Grand Superintendent.

Bombay.

21 Chapters. W. A. Haig-Brown, J.P., Hon. Mag., Grand Superintendent.

Punjab.

18 Chapters. Maj-Genl. Sir George Fletcher McMunn, K.C.B., K.C.S.I., D.S.O. P.A.G. Soj. (Eng.), Grand Superintendent.

Burma.

6 Chapters. James McKenna, C.I.E., Grand Superintendent.

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The present Grand Superintendent of R. A Masonry under Scotland is the Hon Maj.-Gen. W. E. Jennings, C.I.E., and there are 29 Chapters.

There is one Irish Chapter in Calcutta.

Mark Masonry—Under England, Mark Masonry is worked under the Grand Mark Lodge of England and Wales, and divided into separate Districts, but in most cases the District Grand Master is also District Grand Mark Master.

Bengal.

26 Lodges Rt. W. Bro Th Earl of Ronaldshay G.C.I.E., D. Grand Master.

Bombay.

14 Lodges. Rt. W. Bro. W. A. Haig Brown, J. P., Hon. Mag., D. Grand Master.

Madras.

13 Lodges. Rt. W. Bro. Hon. L E. Buckley, C.S.I, D. Grand Master.

Punjab.

14 Lodges. Rt. W. Bro. Maj.-Genl Sir George Fletcher MacMunn, K.C.B., K.C.S.I., D.S O, D. Grand Master.

Burma.

6 Lodges Rt. W. Bro James McKenna, C I.E., District Grand Master.

The Mark degree is incorporated with the Royal arch degree in Irish Chapters. Mark degree is worked in some S. C. Lodges, but mostly in R. A. Chapters, in which the Excellent R A.M. and other degrees can be obtained. S. C. Chapters insist upon candidates being Mark Master Masons before exaltation. Mark degree in Craft Lodges is conferred by the Rt. Wor. Master in S. C. Craft does not recognise the ceremony of Rt. W. Mark Master. This is confined strictly to Chapters. Such Chapter has a Lodge of M. M. M. working under its charter. Separate charters for Mark Lodges are only issued by the G. Chapter of Scotland.

Other Degrees.—There are many side degrees worked in India, of the Ancient and Accepted Rite, no degree higher than the 18° is worked in India under England, but under Scotland the 30° is worked. The Knight Templar Degree is also worked in several places under both English and Scottish jurisdiction. There are fourteen 18th Degree Chapters working in India.

Roman Eagle Conclave No. 43, Bombay.

St. Mary's Commandery No. 43, Bombay.

R. A. Mariner, 72, 514 and 662, Bombay.

R. A. Mariner, 61, 81, 82, and 106, Madras.

Secret Monitor, 14, 21, 36, 37, 40 and 42 Madras.

Benevolent Associations.—Each District works its own benevolent arrangements which include the Relief of Distressed Masons, educational provision for the children of Masons and maintenance provision for widows in poor circumstances.

All information will be given to persons entitled by the District Grand Secretary in each District. The names and addresses of **District Grand Secretaries** are given below:—

D. G. S., Bengal.

J. A. Dolton, P. A. G. D. C. (Eng.), 19, Park Street, Calcutta.

D. G. S, Bombay.

J. F. Pennock, V.D., P.A.G.D.C. (Eng.), Kings Buildings, Fort, Bombay.

D. G S, Burma.

W. Kendall, 4, Hume Road, Rangoon.

D. G. S., Madras.

C. M. Maduranavakam Pillai, Freemasons' Hall, Egmore, Madras.

D. G. S., Punjab.

David E. Johnston, P.G. St. B. (Eng.), Freemasons' Hall, Lahore.

Visit of the Most Worshipful Grand Master.—H R. H. The Duke of Connaught and Strathearn was the outstanding event of the year. Loyal addresses were presented by the District Grand Lodges of Bengal, Madras and Bombay and the Masonic Brotherhood in all these centres gave the Most Worshipful Grand Master a cordial welcome.

Scottish Constitution.—For information regarding the Benevolent Funds application should be made to Arthur W. S. Wise, J.P., 17, Murzban Road, Bombay

Indian Architecture.

I. ANCIENT.

The architecture of India has proceeded on lines of its own, and its monuments are unique among those of the nations of the world. An ancient civilization, a natural bent on the part of the people towards religious fervour of the contemplative rather than of the fanatical sort, combined with the richness of the country in the sterner building materials—these are a few of the factors that contributed to making it what it was, while a stirring history gave it both variety and glamour. Indian architecture is a subject which at the best has been studied only imperfectly, and a really comprehensive treatise on it has yet to be written. The subject is a vast and varied one, and it may be such a treatise never will be written in the form of one work at any rate. The spirit of Indian art is so foreign to the European of art culture that it is only one European in a hundred who can entirely understand it, while art criticism and analysis is a branch of study that the modern Indian has not as yet ventured upon to any appreciable extent. Hitherto the one, and with a few exceptions the only recognized authority on the subject has been Fergusson, whose compendious work is that which will find most ready acceptance by the general reader. But Fergusson attempted the nearly impossible task of covering the ground in one volume of moderate dimensions, and it is sometimes held that he was a man of too purely European a culture, albeit wide and eclectic, to admit of sufficient depth of insight in this particular direction. Fergusson's classification by races and religions is, however, the one that has been generally accepted hitherto. He asserts that there is no stone architecture in India of an earlier date than two and a half centuries before the Christian era, and that "India owes the introduction of the use of stone for architectural purposes, as she does that of Buddhism as a state religion, to the great Asoka, who reigned B.C. 272 to 236."

Buddhist Work.

Fergusson's first architectural period is then the Buddhist, of which the great tope at Sanchi with its famous Northern gateway is perhaps the most noted example. Then we have the Gandharan topes and monasteries. Perhaps the examples of Buddhist architecture of greatest interest and most ready access to the general student are to be found in the Chaitya halls or rock-cut caves of Karli, Ajunta, Nasik, Ellora and Kanheri. A point with relation to the Gandhara work may be alluded to in passing. This is the strong European tendency, variously recognized as Roman, Byzantine but most frequently as Greek, to be observed in the details. The foliage seen in the capitals of columns bears strong resemblance to the Greek acanthus, while the sculptures have a distinct trace of Greek influence, particularly in the treatment of drapery, but also of hair and facial expression. From this it has been a fairly common assumption amongst some authorities that Indian art owed much of its best to European influence, an assumption that is strenuously combated by others as will be pointed out later.

The architecture of the Jains comes next in order. Of this rich and beautiful style the most noted examples are perhaps the Dilwara temples near Mount Abu, and the unique "Tower of Victory" at Chittore.

Other Hindu Styles.

The Dravidian style is the generic title usually applied to the characteristic work of the Madras Presidency and the South of India. It is seen in many rock-cut temples as at Ellora, where the remarkable "Kylas" is an instance of a temple cut out of the solid rock, complete, not only with respect to its interior (as in the case of mere caves) but also as to its exterior. It is, as it were, a life-size model of a complete building or group of buildings, several hundred feet in length, not built, but sculptured in solid stone, an undertaking of vast and, to our modern ideas, unprofitable industry. The Pagoda of Tanjore, the temples at Srirangam, Chidambaram, Vellore, Vijayanagar, &c., and the palaces at Madura and Tanjore are among the best known examples of the style.

The writer finds some difficulty in following Fergusson's two next divisions of classification, the "Chalukyan" of South-central India, and the "Northern or Indo-Aryan style." The differences and the similarities are apparently so intermixed and confusing that he is fain to fall back on the broad generic title of "Hindu"—however unscientific he may thereby stand confessed. Amongst a vast number of Hindu temples the following may be mentioned as particularly worthy of study:—Those at Mukteswara and Bhuvaneswar in Orissa, at Khajuraho, Bindrabun, Udaipur, Benares, Gwalior, &c. The palace of the Hindu Raja Man Singh at Gwalior is one of the most beautiful architectural examples in India. So also are the palaces of Amber, Datiya, Urcha, Dig and Udaipur.

Indo-Saracenic.

Among all the periods and styles in India the characteristics of none are more easily recognizable than those of what is generally called the "Indo-Saracenic" which developed after the Mahomedan conquest. Under the new influences now brought to bear on it the architecture of India took on a fresh lease of activity and underwent remarkable modifications. The dome, not entirely an unknown feature hitherto, became a special object of development, while the arch, at no time a favourite constructional form of the Hindu builders, was now forced on their attention by the predilections of the ruling class. The minaret also became a distinctive feature. The requirements of the new religion,—the mosque with its wide spaces to meet the needs of organized congregational acts of worship—gave opportunities for broad and spacious treatments that had hitherto been to some extent denied. The Moslem hatred of idolatry set a tabu on the use of sculptured representations of animate objects in the adornment of the buildings, and led to the development

of other decorative forms. Great ingenuity came to be displayed in the use of pattern and of geometrical and foliated ornament. This Moslem trait further turned the attention of the builders to a greater extent than before to proportion, scale and mass as means of giving beauty, mere richness of sculptured surface and the aesthetic and symbolic interest of detail being no longer to be depended on to the same degree.

The art was thus the gainer by the new conditions. It gained in power and variety much as "Classic" architecture gained under the Romans. But it equally lost something too. The Indo-Saracenic is apt to appear cold and hard. The writer was impressed by this on his first view of the Gwalior palace already mentioned. Though a Hindu building that palace has yet much of what might be called the more sophisticated quality of the Indo-Saracenic work as well as some similarity of detail. It has, being Hindu, a certain amount of sculptured ornament of animated forms, and the general effect of roundness, richness and interest thereby imparted seemed eloquent in suggestion as to what is lacking in so many of the Mahometan buildings.

Foreign Influence.

There would appear to be a conflict between archæologists as to the extent of the effect on Indian art produced by foreign influence under the Mahometans. The extreme view on the one hand is to regard all the best of the art as having been due to foreign importation. The Gandharan sculptures with their Greek tendency, the development of new forms and modes of treatment to which allusion has been made, the similarities to be found between the Mahometan buildings of India and those of North Africa and Europe, the introduction of the minaret and, above all, the historical evidences that exist of the presence in India of Europeans during Mogul times, are cited in support of the theory. On the other hand those of the opposite school hold the foregoing view to be due to the prevailing European preconception that all light and leading must come by way of Europe, and the best things in art by way of Greece. To them the Gandharan sculpture, instead of being the best, is the worst in India even because of its Greek tincture. They find in the truly indigenous work beauties and significances not to be seen in the Graeco-Bactrian sculptures, and point to those of Borobudei in Java, the work of Buddhist colonists from India, wonderfully preserved by reason of an immunity from destructive influences given by the insular position, as showing the best examples of the art extant. It is probable that a just estimate of the merits of the controversy, with respect to sculpture at any rate, cannot be formed till time has obliterated some of the differences of taste that exist between East and West.

To the adherents of the newer school the undisputed similarities between Indo-Mahometan and Hindu buildings outweigh those between Indian and Western Mahometan work, especially in the light of the dis-similarities between the latter. They admit the changes produced by the advent of Islam, but contend that the art; though modified, yet remained in its essence what it had always been, indigenous Indian. The minaret, the dome, the arch, they contended, though developed under the Moslem influence, were yet, so far as their detailed treatment and craftsmanship are concerned, rendered in a manner distinctively Indian. Fergusson is usually regarded as the leader of the former school, while the latter and comparatively recent school has at present found an eager champion in Mr. E. B. Havell, whose works, on the subject are recommended for study side by side with those of the former writer. Mr. Havell practically discards Fergusson's racial method of classification into styles in favour of a chronological review of what he regards to a greater extent than did his famous precursor as being one continuous homogeneous Indian mode of architectural expression, though subject to variations from the influences brought to bear upon it and from the varied purposes to which it was applied.

Agra and Delhi.

Agra and Delhi may be regarded as the principal centres of the Indo-Saracenic style—the former for the renowned Taj Mahal, for Akbar's deserted capital of Fatehpur Sikri, his tomb at Secundra, the Moti Musjid and palace buildings at the Agra fort. At Delhi we have the great Jumma Musjid, the Fort, the tombs of Humayon, Sufdar Jung, &c., and the unique Qutb Minar. Two other great centres may be mentioned, because in each there appeared certain strongly marked individualities that differentiated the varieties of the style there found from the variety seen at Delhi and Agra, as well as that of one from that of the other. These are Ahmedabad in Gujarat and Bijapur on the Dekhan, both in the Bombay Presidency.

Ahmedabad.

At Ahmedabad with its neighbours Sirkhej and Champanir there seems to be less of a departure from the older Hindu forms, a tendency to adhere to the lintel and bracket rather than to have recourse to the arch, while the dome though constantly employed, was there never developed to its full extent as elsewhere, or carried to its logical structural conclusion. The Ahmedabad work is probably most famous for the extraordinary beauty of its stone "jali"—or pierced lattice-work, as in the palm tree windows of the Sidi Sayyid Musjid.

Bijapur.

The characteristics of the Bijapur variety of the style are equally striking. They are perhaps more distinctively Mahomedan than those of the Ahmedabad buildings in that here the dome is developed to a remarkable degree, indeed the tomb of Mahmud—the well-known "Gol Gumbaz"—is cited as shewing the greatest space of floor in any building in the world roofed by a single dome, not even excepting the Pantheon. The lintel also was here practically discarded in favour of the arch. The Bijapur style shews a bold masculine quality and a largeness of structural conception that is unequalled elsewhere in India, though in richness and delicacy it does not attempt to rival the work of the further North. In this we recognize among other influences

that of the prevailing material, the hard uncompromising Dekhan basalt. In a similar manner the characteristics of the Ahmedabad work with its greater richness of ornamentation are bound up with the nature of the Gujarat freestone, while at Delhi and Agra the freer choice of materials available—the local red and white sandstones, combined with access to marble and other more costly materials—was no doubt largely responsible for the many easily recognizable characteristics of the architecture of these centres.

II. MODERN.

The modern architectural work of India divides itself sharply into two classes. There is first that of the indigenous Indian "Master-builder" to be found chiefly in the Native States, particularly those in Rajputana. Second there is that of British India, or of all those parts of the peninsula wherever Western ideas and methods have most strongly spread their influence, chiefly, in the case of architecture, through the medium of the Department of Public Works. The work of that department has been much animadverted upon as being all that building should not be, but, considering it has been produced by men of whom it was admittedly not the *metier*, and who were necessarily contending with lack of expert training on the one hand and with departmental methods on the other, it must be conceded that it can shew many notable buildings. Of recent years there has been a tendency on the part of professional architects to turn their attention to India, and a number of these has even been drafted into the service of Government as the result of a policy initiated in Lord Curzon's Viceroyalty. In time, therefore, and with the growth of the influence of these men, such of the reproach against the building of the British in India as was just and was not merely thoughtlessly maintained as a corollary to the popular jape against everything official, may gradually be removed. If this is so as to Government work progress should be even more assured in the freer atmosphere outside of official life. Already in certain of the greater cities, where the trained modern architect has established himself, in private practice, there are signs that his influence is beginning to be felt. He still complains, however, that the general public of India needs much educating up to a recognition of his value; both in a pecuniary sense and otherwise. It is also to be observed that the survival of a relic of the popular idea of the time before his advent, to the effect that though an architect might occasionally "design" a building it was always an engineer who built it, is still indicated by the architect in some cases deeming it advisable to style himself "architect and engineer."

To the work of the indigenous "master-builder" public attention has of recent years been drawn with some insistence, and the suggestion has been pressed that efforts should be directed towards devising means for the preservation of what is pointed out—and now universally acknowledged— to be a remarkable survival—almost the only one left in the world—of "living art," but which is threatened with gradual extinction by reason of the spread of Western ideals and fashions. The matter assumed some years ago the form of a mild controversy centring round the question of the then much discussed project of the Government of India's new capital at Delhi. It was urged that this project should be utilised to give the required impetus to Indian art rather than that it should be made a means of fostering European art which needed no such encouragement at India's expense. The advocates of this view appear for the most part to have been adherents of the "indigenous Indian" school of archæologists already mentioned, and to have based their ideas on their own reading of the past. They still muster a considerable following not only amongst the artistic public of England and India, but even within the Government services. Their opponents, holding what appears to be the more official view both as to archæology and art, have pointed to the "death" of all the arts of the past in other countries as an indication of a natural law, and deprecate as waste of energy all efforts to resist this law, or to institute what they have termed "another futile revival." The British in India they contend, should do as did the ancient Romans in every country on which they planted their conquering foot. As those were wont to replace indigenous art with that of Rome, so should we set our seal of conquest permanently on India by the erection of examples of the best of British art. This is the view which, as we have indicated, appears to have obtained for the moment the more influential hearing, and the task of designing and directing the construction of the principal buildings in the new Capital has accordingly been entrusted jointly to a London and to a South African architect, neither of whom can be unduly influenced by either past or recent architectural practice so far as India is concerned.

The results cannot but be awaited with the keenest interest, and meanwhile the controversy, with suspended judgment, naturally falls into abeyance. It is, moreover, however vital to the interests of the country's architecture, too purely technical and academic for its merits to be estimated by the general reader or discussed here. Its chief claim on our attention has in the fact that it affords an added interest to the tourist, who may see the fruits of both schools of thought in the various modern buildings of British India as well as examples of the "master builders" work in nearly every native town and bazaar. The town of Lashkar in Gwalior State may be cited as peculiarly rich in instances of picturesque modern Indian street architecture, while at Jaipur, Udaipur, Benares, etc., this class of work may be studied in many different forms both civil and religious. The extent to which the "unbroken tradition from the past" exists may there be gauged by the traveller who is architect enough for the purpose.

Archæology.

The archæological treasures of India are as varied as they are numerous. Those of the pre-Muhammadan period may roughly be divided into (1) architectural and sculptural monuments and (2) inscriptions. No building or sculpture in India with any pretensions to be considered an example of architecture or art can be ascribed to a time earlier than that of Asoka (circa 250 B.C.). In the pre-Asoka architecture of India, as in that of Burma or China at the present day, wood was solely or almost solely employed. Even at the close of the 4th century, B.C., Megasthenes, the Greek Ambassador at the court of Chandragupta, grandfather of Asoka, describes Pataliputra, the capital of the Indian monarch, as "surrounded by a wooden wall pierced with loop-holes for the discharge of arrows." If the capital itself was thus defended, we can easily infer that the architecture of the period was wooden. And long long after stone was introduced the lithic styles continued to be influenced by, or copied from, the wooden.

Monumental Pillars.—The first class of works that we have to notice are the monumental pillars, known as *lats*. The oldest are the monolithic columns of Asoka, nearly thirty in number, of which ten bear his inscriptions. Of these the Lauriya-Nandangarh column in the Champaran District, Tirhut, is practically uninjured. The capital of each column, like the shaft, was monolithic, and comprised three members, *viz.*, a Persepolitan bell, abacus, and crowning sculpture in the round. By far the best capital of Asoka's time was that exhumed at Sarnath near Benares. The four lions standing back to back on the abacus are carved with extraordinary precision and accuracy. Of the post-Asokan period one pillar (B.C. 150) stands to the north-east of Besnagar in the Gwalior State, another in front of the cave of Karli (A.D. 70), and a third at Eran in Central Provinces belonging to the 5th Century, A. D. All these are of stone; but there is one of iron also. It is near the Qutb Minar at Delhi, and an inscription on it speaks of its having been erected by a king called Chandra, identified with Chandragupta II. (A.D. 375-413) of the Gupta dynasty. It is wonderful "to find the Hindus at that age forging a bar of iron larger than any that have been forged even in Europe to a very late date, and not frequently even now." Pillars of later style are found all over the country, especially in the Madras Presidency. No less than twenty exist in the South Kanara District. A particularly elegant example faces a Jaina temple at Mudabidri, not far from Mangaloro.

Topes.—*Stupas*, known as *dagabas* in Ceylon and commonly called Topes in North India, were constructed either for the safe custody of relics hidden in a chamber often near the base or to mark the scene of notable events in Buddhist or Jaina legends. Though we know that the ancient Jainas built *stupas*, no specimen of Jaina *stupas* is now extant. Of those belonging to the Buddhists, the great Tope of Sanchi in Bhopal, is the most intact and entire of its class. It consists of a low circular drum supporting a hemispherical dome of less diameter. Round the drum is an open passage for circumambulation, and the whole is enclosed by a massive stone railing with lofty gates facing the cardinal points. The gates are essentially wooden in character, and are carved, inside and out, with elaborate sculptures. The *stupa* itself probably belonged to the time of Asoka, but as Sir John Marshall's recent explorations have conclusively shown, the railing and the gateways were at least 150 and 200 years later, respectively. Other famous Buddhist *stupas* that have been found are those of Bharhut between Allahabad and Jubbulpore, Amravati in the Madras Presidency, and Piprahwa on the Nepalese frontier. The tope proper at Bharhut has entirely disappeared, having been utilised for building villages, and what remained of the rail has been removed to the Calcutta Museum. The bas-reliefs on this rail which contain short inscriptions and thus enable one to identify the scenes sculptured with the *Jatakas* or Birth Stories of Buddha give it a unique value. The *stupa* at Amravati also no longer exists, and portions of its rail, which is unsurpassed in point of elaboration and artistic merit, are now in the British and Madras Museums. The *stupa* at Piprahwa was opened by Mr. W. C. Peppe in 1898, and a steatite or soap-stone reliquary with an inscription on it was unearthed. The inscription, according to many scholars, speaks of the relics being of Buddha and enshrined by his kinsmen, the Sakyas. And we have thus here one of the *stupas* that were erected over the ashes of Buddha immediately after his demise.

Caves.—Of the rock excavations which are one of the wonders of India, nine-tenths belong to Western India. The most important groups of caves are situated in Bhaja Bedsa, Karli, Kanheri, Junnar, and Nasik in the Bombay Presidency, Ellora and Ajanta in Nizam's Dominions, Barabar 16 miles north of Gaya, and Udayagiri and Khandagiri 20 miles from Cuttack in Orissa. The caves belong to the three principal sects into which ancient India was divided, *viz.*, the Buddhists, Hindus and Jainas. The earliest caves so far discovered are those of Barabar which were excavated by Asoka and his grandson Dasaratha, and dedicated to Ajivikas, a naked sect founded by Makkhali Gosala. This refutes the theory that cave architecture was of Buddhist origin. The next earliest caves are those of Bhaja, Pitalkhora and cave No. 9 at Ajanta and No. 19 at Nasik. They have been assigned to 200 B.C. by Fergusson and Dr. Burgess. But there is good reason to suppose from Sir John Marshall's recent researches and from epigraphic considerations that they are considerably more modern. The Buddhist caves are of two types—the *chaityas* or chapel caves and *viharas* or monasteries for the residence of monks. The first are with vaulted roofs and horse-shoe shaped windows over the entrance and have interiors consisting of a nave and side aisles with a small *stupa* at the inner circular end. They are thus remarkably similar to Christian basilicas. The second class consist of a hall surrounded by a number of cells. In the later *viharas* there was a sanctum in the centre of the back wall containing a large image of Buddha. Hardly a *chaitya* is found without one or more *viharas* adjoining it. Of the Hindu cave tem-

ples that at Elephanta near Bombay is perhaps the most frequented. It is dedicated to Siva and is not earlier than the 7th century A.D. But by far the most renowned cave-temple of the Hindus is that known as Kailasa at Ellora. It is on the model of a complete structural temple but carved out of solid rock. It also is dedicated to Siva and was excavated by the Rashtrakuta king, Krishna I, (A. D. 768), who may still be seen in the paintings in the ceilings of the upper porch of the main shrine. Of the Jaina caves the earliest are at Khandgiri and Udayagiri; those of the mediæval type, in Indra Sabha at Ellora; and those of the latest period, at Ankai in Nasik. The ceilings of many of these caves were once adorned with fresco paintings. Perhaps, the best preserved among these are those at Ajanta, which were executed at various periods between 350-650 A.D. and have elicited high praise as works of art. Copies were first made by Major Gill, but most of them perished by fire at the Crystal Palace in 1866. The lost ones were again copied by John Griffiths of the Arts School, Bombay, half of whose work was similarly destroyed by a fire at South Kensington. They were last copied by Lady Herringham during 1909-11. Her pictures, which are in full scale, are at present exhibited at the Indian Section of the Victoria and Albert Museum, South Kensington, and have been reproduced in a volume brought out by the India Society.

Gandhara Monuments.—On the north-west frontier of India, anciently known as Gandhara, are found a class of remains, ruined monasteries and buried *stupas*, among which we notice for the first time representations of Buddha and the Buddhist pantheon. The free use of Corinthian capitals, friezes of nude Erotes bearing a long garland, winged Atlantes without number, and a host of individual motifs clearly establish the influence of Hellenistic art. The mound at Peshawar, locally known as Shah-ji-ke-Dheri, which was explored in 1909, brought to light several interesting sculptures of this school together with a reliquary casket, the most remarkable bronze object of the Gandhara period. The inscription on the casket left no doubt as to the mound being the *stupa* raised over the bones of Buddha by the Indo-Scythian king Kanishka. They were presented by Lord Minto's Government to the Buddhists of Burma and are now enshrined at Mandalay. To about the same age belong the *stupas* at Manikyala in the Punjab opened by Ranjit Singh's French Generals, Ventura and Court, in 1830. Some of them contained coins of Kanishka.

Structural Temples.—Of this class we have one of the earliest examples at Sanchi, and another at Tigowa in the Central Provinces. In South India we have two more examples, *viz.*, Lad Khan and Durga temples at Aihole in Bijapur. All these belong to the early Gupta period and cannot be later than 500 A.D. The only common characteristic is flat roofs without spires of any kind. In other respects they are entirely different and already here we mark the beginning of the two styles, Indo-Aryan and Dravidian, whose differences become more and more pronounced from the 7th century onwards. In the Indo-Aryan style, the most prominent lines tend to the perpendicular, and in the Dravidian to the horizontal. The salient feature of the former again is the curvilinear steeple, and of the latter, the pyramidal tower. The most notable examples of the first kind are to be found among the temples of Bhubaneswar in Orissa, Khajarah in Bundelkhand, Osia in Jodhpur, and Dilwara on Mount Abu. One of the best known groups in the Dravidian style is that of the Mamallapuram Raths, of 'Seven Pagodas', on the seashore to the south of Madras. They are each hewn out of a block of granite, and are rather models of temples than *raths*. They are the earliest examples of typical Dravidian architecture, and belong to the 7th century. To the same age has to be assigned the temple of Kailasanath at Conjeeveram, and to the following century some of the temples at Aihole and Pattadkal of the Bijapur District, Bombay Presidency, and the monolithic temple of Kailasa at Ellora, referred to above. Of the later Dravidian style the great temple at Tanjore and the Srirangam temple of Trichinopoly are the best examples.

Intermediate between these two main styles comes the architecture of the Deccan, called Chalukyan by Fergusson. In this style the plan becomes polygonal and star-shaped instead of quadrangular; and the high-storeyed spire is converted into a low pyramid in which the horizontal treatment of the Dravidian is combined with the perpendicular of the Indo-Aryan. Some fine examples of this type exist, at Dambal, Rattihali, Tilliwalli and Hangal in Dharwar, Bombay Presidency, and at Ittagi and Warangal in Nizam's Dominions. But it is in Mysore among the temples at Hallebid, Belur, and Somnathpur that the style is found in its full perfection.

Inscriptions.—We now come to inscriptions, of which numbers have been brought to light in India. They have been engraved on varieties of materials, but principally on stone and copper. The earliest of these are found incised in two distinct kinds of alphabet, known as Brahmi and Kharoshthi. The Brahmi was read from left to right, and from it have been evolved all the modern vernacular scripts of India. The Kharoshthi was written from right to left, and was a modified form of an ancient Aramaic alphabet introduced into the Punjab during the period of the Persian domination in the 5th century B.C. It was prevalent up to the 4th century A.D., and was supplanted by the Brahmi. The earliest dateable inscriptions are the celebrated edicts of Asoka. One group of these has been engraved on rocks, and another on pillars. They have been found from Shahbazgarhi 40 miles north-east of Peshawar to Nigliva in the Nepal Tarai, from Girnar in Kathiawar to Dhauli in Orissa, from Kalsi in the Lower Himalayas to Siddapur in Mysore, showing by the way the vast extent of territory held by him. The reference in his Rock Edicts to the five contemporary Greek Princes, Antiochus II. of Syria, Ptolemy Philadelphus, and so forth is exceedingly interesting, and fixes B.C. 269 as the date of his coronation. His Rummindei pillar inscription, again, discovered in Nepal Tarai, now settles, beyond all doubt, the birth-place of Buddha which was for long disputed. Another noteworthy record is the inscription of the Besnagar pillar. The pillar had been known for a long time, but Sir John

Marshall was the first to notice the inscription on it. It records the erection of this column, which was a Garuda pillar, in honour of the god Vasudeva by one Heliodoros, son of Dion, who is described as an envoy of King Antialkidas of Taxila. Heliodorous is herein called a *Bhagavata*, which shows that though a Greek he had become a Hindu and presumably a Vaishnava. Another inscription worth noticing and especially in this connection is that of Cave No. 10 at Nasik. The donor of this cave, Ushavadata, who calls himself a Saka and was thus an Indo-Scythian, is therein spoken of as having granted three hundred thousand kine and sixteen villages to gods and Brahmans and as having annually fed one hundred thousand Brahmans. Here is another instance of a foreigner having embraced Hinduism. Thus for the political, social, economical and religious history of India at the different periods the inscriptions are invaluable records, and are the only light but for which we are 'forlorn and blind.'

Saracenic Architecture.—This begins in India with the 13th century after the permanent occupation of the Muhammadans. Their first mosques were constructed of the materials of Hindu and Jaina temples, and sometimes with comparatively slight alterations. The mosque called *Adhai-din-ka-jhompra* at Ajmer and that near the Qutb Minar are instances of this kind. The Muhammadan architecture of India varied at different periods and under the various dynasties, imperial and local. The early Pathan architecture of Delhi was massive and at the same time was characterised by elaborate richness of ornamentation. The Qutb Minar and tombs of Altamsh and Ala-ud-din Khilji are typical examples. Of the Sharqi style we have three mosques in Jaunpur with several tombs. At Mandu in the Dhar State, a third form of Saracenic architecture sprung up, and we have here the Jami Masjid, Hoshang's tomb, Jahaz Mahall and Hindola Mahall as the most notable instances of the secular and ecclesiastical styles of the Malwa Pathans. The Muhammadans of Bengal again developed their own style, and Pandua, Malda, and Gaur teem with the ruins of the buildings of this type, the important of which are the Adina Masjid of Sikandar Shah, the Elakhi mosque, Kadam Rasul Masjid, and so forth. The Bahmani dynasty of Gulbarga and Bidar were also great builders, and adorned their capitals with important buildings. The most striking of these is the great mosque of Gulbarga, which differs from all mosques in India in having the whole central area covered over so that what in others would be an open court is here roofed by sixty-three small domes. "Of the various forms which the Saracenic architecture assumed," says Fergusson, "that of Ahmedabad may probably be considered to be the most elegant." It is notable for its carved stone work; and the work of the perforated stone windows in Sidi Sayyid's mosque, the carved niches of the minars of many other mosques, the sculptured *Mihrabs* and domed and panelled roofs is so exquisite that it will rival anything of the sort executed elsewhere at any period. No other style is so essentially Hindu. In complete contrast with this was the form of architecture employed by the Adil Shahi dynasty of Bijapur. There is here relatively little trace of Hindu forms or details. The principal buildings now left at Bijapur are the Jami Masjid, Gagan Mahall, Mihtar Mahall, Ibrahim Rauza and mosque and the Gol Gumbaz. Like their predecessors, the Pathans of Delhi, the Moghuls were a great building race. Their style first began to evolve itself during the reign of Akbar in a combination of Hindu and Muhammadan features. Noteworthy among the emperor's buildings are the tomb of Humayun, and the palaces at Fatehpur, Sikri and Agra. Of Jehangir's time his mosque at Lahore and the tomb of Itimad-ud-daula are the most typical structures. "The force and originality of the style gave way under Shah Jahan to a delicate elegance and refinement of detail." And it was during his reign that the most splendid of the Moghul tombs, the Taj Mahal at Agra, the tomb of his wife Mumtaz Mahall, was constructed. The Moti Masjid in Agra Fort is another surpassingly pure and elegant monument of his time.

Archæological Department.—As the archæological monuments of India must attract the attention of all intelligent visitors, they would naturally feel desirous to know something of the Archæological Department. The work of this Department is primarily two-fold, conservation, and research and exploration. None but spasmodic efforts appear to have been made by Government in these directions till 1870 when they established the Archæological Survey of India and entrusted it to General (afterwards Sir) Alexander Cunningham, who was also the first Director-General of Archæology. The next advance was the initiation of the local Surveys in Bombay and Madras three years after. The work of these Surveys, however, was restricted to antiquarian research and description of monuments, and the task of conserving old buildings was left to the fitful efforts of the local Governments, often without expert guidance or control. It was only in 1878 that the Government of India under Lord Lytton awoke to this deplorable condition, and sanctioned a sum of 3½ lakhs to the repair of monuments in United Provinces, and soon after appointed a conservator, Major Cole, who did useful work for three years. Then a reaction set in, and his post and that of the Director-General were abolished. The first systematic step towards recognising official responsibility in conservation matters was taken by Lord Curzon's Government, who established the seven Archæological Circles that now obtain, placed them on a permanent footing, and united them together under the control of a Director-General, provision being also made for subsidising local Governments out of imperial funds, when necessary. The Ancient Monuments Preservation Act was passed for the protection of historic monuments and relics especially in private possession and also for State control over the excavation of ancient sites and traffic in antiquities. Under the direction of Sir John Marshall, Kt., C.I.E., Director-General of Archæology, a comprehensive and systematic campaign of repair has been prosecuted, and the result of it is manifest in the present altered conditions of old buildings. One has only to see for example the Moghul buildings at Agra, Delhi, Lahore and Ajmer, in order to be convinced how the work of careful reconstruc-

tion and repair has converted these decayed and desecrated monuments with their modern excrescences into edifices of unrivalled loveliness. Another noteworthy feature of this work has been the rescue of many of these buildings from profane and sacrilegious uses. It is well-known that the superb Pearl Mosque of Jahangir in the Lahore Fort contained a Government treasury, and the Sleeping Hall of Shah Jahan served as a Church for the British troops. At Bijapur two mosques have been recovered, one of which was used as Dak Bungalow and the other as Post Office. The local Kutcherry has now been expelled from the lovely musjid of Sidi Sayyid at Ahmedabad. The Cave temples at Trichinopoly are no longer godowns. Nor has research work been in any way neglected under the new order of things. A unique feature of it for the first time introduced under the guidance and advice of Sir John Marshall has been the scientific excavation of buried sites, such as Sarnath where Buddha preached his first sermon, Kasia or Kusinara where he died, Saheth-Maheth the ancient Srasvasti, Taxila or Takshasila, the seat of the ancient Hindu University, Patna or Pataliputra, the Mauryan capital, Besnagar or the ancient Vidisa, and so forth. The results achieved, especially at the last three places, are of a sensational character. At Taxila Sir John has brought to light the remains of a palace of the Assyrian style and a massive and imposing temple dedicated to Zoroastrian worship and resembling a Greek peripteral temple with the addition of a solid tower of the Likkurat type rising behind the shrine. At Patna Dr. D. B. Spooner has found traces of a Mauryan palace which is an actual replica of the Achæmenian palace at Persepolis. At Besnagar Mr. D. R. Bhandarkar has excavated a temple of Vasudeva of the third century B.C., which proves to be the oldest of all Hindu shrines in India. Among other results of this excavation is the noteworthy discovery that the art of forging steel was practised in India more than two thousand years ago and that mortar was used in the construction of brick masonry at least as early as the third century B.C.

TIDAL CONSTANTS.

The approximate standard time of High Water may be found by adding to, or subtracting from, the time of High Water at London Bridge, given in the calendar, the correction given as below :—

		H.	M.			H.	M.
Gibraltar	*sub.*	0	32	Rangoon River Entrance ..	*add*	1	35
Malta	*add*	1	34	Penang	*sub.*	1	39
Karachi	*sub.*	2	33	Singapore	,,	3	25
Bombay	,,	1	44	Hongkong	,,	4	27
Goa	,,	2	44	Shanghai	,,	0	34
Point de Galle	*add*	0	12	Yokohama	*add*	3	6
Madras	*sub.*	5	6	Valparaiso	*sub.*	4	40
Calcutta	*sub.*	0	19	Buenos Ayres	*add*	4	9
Rangoon Town	*add*	2	41	Monte Video	,,	0	32

Manners and Customs.

Next to the complexion of the people, which varies from fair to black, the tourist's attention in India is drawn by their dress and personal decoration. In its simplest form a Hindu's dress consists of a piece of cloth round the loins. Many an ascetic, who regards dress as a luxury, wears nothing more, and he would dispense with even so much if the police allowed him to. The Mahomedan always covers his legs, generally with trousers, sometimes with a piece of cloth tied round the waist and reaching to the ankles. Hill men and women, who at one time wore a few leaves before and behind and were totally innocent of clothing, do not appear to-day within the precincts of civilisation and will not meet the tourist's eye. Children, either absolutely nude or with a piece of metal hanging from the waist in front, may be seen in the streets in the most advanced cities, and in the homes of the rich. The child Krishna, with all the jewels on his person, is nude in his pictures and images.

Dress.—The next stage in the evolution of the Hindu dress brings the loincloth nearly down to the feet. On the Malabar coast, as in Burma, the ends are left loose in front. In the greater part of India, they are tucked up behind—a fashion which is supposed to befit the warrior, or one end is gathered up in folds before and the other tucked up behind. The simplest dress for the trunk is a scarf thrown over the left shoulder, or round both the shoulders like a Roman toga. Under this garment is often worn a coat or a shirt. When an Indian appears in his full indigenous dress, he wears a long robe, reaching at least down to the calves: the sleeves may be wide, or long and sometimes puckered from the wrist to the elbow. Before Europeans introduced buttons, a coat was fastened by ribbons, and the fashion is not obsolete. The Mahomedan prefers to button his coat to the left, the Hindu to the right. A shawl is tied round the waist over the long coat, and serves as a belt, in which one may carry money or a weapon, if allowed. The greatest variety is shown in the head-dress. More than seventy shapes of caps, hats, and turbans, may be seen in the city of Bombay. In the Punjab and the United Provinces, in Bengal, in Burma and in Madras other varieties prevail. Cones and cylinders, domes and truncated pyramids, high and low, with sides at different angles: folded brims, projecting brims: long strips of cloth wound round the head or the cap in all possible ways, ingenuity culminating perhaps in the "parrot's beak" of the Maratha turban—all these fashions have been evolved by different communities and in different places, so that a trained eye can tell from the head-covering whether the wearer is a Hindu, Mahomedan or Parsi, and whether he hails from Poona or Dharwar, Ahmedabad or Bhavnagar.

Fashion Variations.—Fashions often vary with climate and occupation. The Bombay fisherman may wear a short coat and a cap, and may carry a watch in his pocket; yet, as he must work for long hours in water; he would not cover his legs, but suspend only a coloured kerchief from his waist in front. The Pathan of the cold north-west affects loose baggy trousers, a tall head-dress befitting his stature and covers his ears with its folds as if to keep off cold. The poorer people in Bengal and Madras do not cover their heads, except when they work in the sun or must appear respectable. Many well-to-do Indians wear European dress at the present day, or a compromise between the Indian and European costumes, notably the Indian Christians and Parsis. Most Parsis however have retained their own head-dress, and many have not borrowed the European collar and cuffs. The majority of the people do not use shoes: those who can afford them wear sandals, slippers and shoes, and a few cover their feet with stockings and boots after the European fashion in public.

Women's Costumes.—The usual dress of a woman consists of a long piece of cloth tied round the waist, with folds in front, and one end brought over the shoulder or the head. The folds are sometimes drawn in and tucked up behind. In the greater part of India women wear a bodice: on the Malabar coast many do not, but merely throw a piece of cloth over the breast. In some communities petticoats, or drawers, or both are worn. Many Mussalman ladies wear gowns and scarfs over them. The vast majority of Mahomedan women are *gosha*, and their dress and persons are hidden by a veil when they appear in public: a few converts from Hinduism have not borrowed the custom. In Northern India Hindu women have generally adopted the Mussalman practice of seclusion. In the Dekhan and in Southern India they have not.

As a rule the hair is daily oiled, combed, parted in the middle of the head, plaited and rolled into a chignon, by most women. Among high caste Hindu widows sometimes shave their heads in imitation of certain ascetics, or monks and nuns. Hindu men do not, as a rule, completely shave their heads, Mahomedans in most cases do. The former generally remove the hair from a part of the head in front, over the temples, and near the neck, and grow it in the centre, the quantity grown depending upon the fancy of the individual. Nowadays many keep the hair cropped in the European fashion, which is also followed by Parsis and Indian Christians. Most Mussalmans grow beards, most Hindus do not, except in Bengal and elsewhere, where the Mahomedan influence was paramount in the past. Parsis and Christians follow their individual inclinations. Hindu ascetics, known as Sadhus or Bairagis as distinguished from Sanyasis, do not clip their hair, and generally coil the uncombed hair of the head into a crest, in imitation of the god Shiva.

Hindu women wear more ornaments than others of the corresponding grade in society. Ornaments bedeck the head, the ears, the nose, the neck, the arms, wrists, fingers, the waist—until motherhood is attained, and by some even later—and the toes. Children wear anklets. Each community affects its peculiar ornaments, though imitation is not uncommon. Serpents with several heads, and flowers, like the lotus, the rose, and the champaka, are among the most popular object of representation in gold or silver.

Caste Marks.—Caste marks constitute a mode of personal decoration peculiar to Hindus, especially of the higher castes. The simplest mark is a round spot on the forehead. It represents prosperity or joy, and is omitted in mourning and on fast-days. It may be red, or yellowish as when it is made with ground sandalwood paste. The worshippers of Vishnu draw a vertical line across the spot, and as Lakshmi is the goddess of prosperity, it is said to represent her. A more elaborate mark on the forehead has the shape of U or V, generally with the central line, sometimes without it, and represents Vishnu's foot. The worshippers of Shiva adopt horizontal lines, made with sandalwood paste or ashes. Some Vaishnavas stamp their temples, near the corners of the eyes, with figures of Vishnu's conch and disc. Other parts of the body are also similarly marked. The material used is a kind of yellowish clay. To smear the arms and the chest with sandalwood paste is a favourite kind of toilet, especially in the hot season. Beads of Tulsi or sacred Basil, and berries of Rudraksha *elæocarpus ganitrus*, strung together are worn round their necks by Vaishnavas and Shaivas, respectively. The Lingayats, a Shaiva sect, suspend from their necks a metallic casket containing the Linga or phallus of their god. Bairagis, ascetics, besides wearing Rudraksha rosaries round their necks and matted hair, smear their bodies with ashes. Religious mendicants suspend from their necks figures of the gods in whose name they beg. Strings of cowries may also be seen round their necks. Muslim dervishes sometimes carry peacock's feathers.

Hindu women mark their foreheads with a red spot or horizontal line. High caste widows are forbidden to exhibit this sign of happiness, as also to deck themselves with flowers or ornaments. Flowers are worn in the chignon. Hindu women smear their faces, arms, and feet sometimes with a paste of turmeric, so that they may shine like gold. The choice of the same colour for different purposes cannot always be explained in the same way. The red liquid with which the evil eye is averted may be a substitute for the blood of the animal slaughtered for the purpose in former times. In many other cases this colour has no such associations. The Muslim dervish affects green, the Sikh Akali is fond of blue, the Sanyasi adopts orange for his robe, and no reason can be assigned with any degree of certainty.

Shiva.—India is a land of temples, mosques and shrines, and the Hindu finds at every turn some supernatural power to be appeased. Shiva has the largest number of worshippers. He has three eyes, one in his forehead, a moon's crescent in his matted hair, and at the top of the coil a woman's face representing the river Ganges. His abode is the Mount Kailas in the Himalayas, from which the river takes its source. Round his neck and about his ears and limbs are serpents, and he also wears a necklace of skulls. In his hands are several weapons, especially a trident, a bow, and a thunderbolt, and also a drum which he sounds while dancing for he is very fond of this exercise. He sits on a tiger's skin, and his vehicle is a white bull. His wife Parvati and his son Ganesha sit on his thighs. An esoteric meaning is attached to every part of his physical personality. The three eyes denote an insight into the past, present and future: the moon, the serpents, and the skulls denote months, years and cycles, for Shiva is a personification of time, the great destroyer. He is also worshipped as a Linga or phallus which represents creative energy.

Ganpati.—Ganesh or Ganpati, the controller of all powers of evil subject to Shiva, is worshipped by all sects throughout India. Every undertaking is begun with a prayer to him. He has the head of an elephant, a large abdomen, serpents about his waist and wrists, several weapons in his hands, and a piece of his tusk in one hand. He is said to have broken it off when he wanted to attack the moon for ridiculing him. The different parts of his body are also esoterically explained. His vehicle is a rat.

Parvati.—Parvati, the female energy of Shiva, is worshipped under various names and forms. She is at the head of all female supernatural powers, many of whom are her own manifestations. Some are benign and beautiful, others terrible and ugly. Kali, the tutelary deity of Kalighat or Calcutta, is one of her fierce manifestations. In this form she is black: a tongue smeared with blood projects from her gaping mouth: besides her weapons, she carries corpses in her hands, and round her neck are skulls. Bombay also takes its name from a goddess, Mumbadevi. Gouri, to whom offerings are made in Indian homes at an annual festival, is benign. On the other hand the epidemic diseases like the plague and smallpox are caused by certain goddesses or "mothers."

Vishnu, the second member of the Hindu trinity, is the most popular deity next to Shiva. He is worshipped through his several incarnations as well as his original personality. His home is the ocean of milk, where he reclines on the coils of a huge, many-headed serpent. At his feet sits Lakshmi, shampooing his legs. From his navel issues a lotus, on which is seated Brahma, the third member of the trinity. In his hands are the conch, which he blows on the battlefield, and the disc, with which the heads of his enemies are severed. Round his neck are garlands of leaves and flowers, and on his breast are shining jewels. As Shiva represents destruction, Vishnu represents protection, and his son is the god of love. To carry on the work of protection, he incarnates himself from time to time, and more temples are dedicated nowadays to his most popular incarnations; Rama and Krishna, than to his original personality. Rama is a human figure, with a bow in one of his hands. He is always accompanied by his wife Sita, often by his brother Lakshmana, and at his feet, or standing before him with joined hands, is Hanuman, the monkey chieftain, who assisted him in his expedition against Ravana, the abductor of his wife. Krishna is also a human figure, generally represented as playing on a flute, with which he charmed the damsels of his city, esoterically explained to mean his devotees.

Brahma is seldom worshipped: only a couple of temples dedicated to him have yet been discovered in all India.

Minor Deities.—The minor gods and goddesses and the deified heroes and heroines who fill the Hindu pantheon, and to whom shrines are erected and worship is offered, constitute a legion. Many of them enjoy a local reputation, are unknown to sacred literature, and are worshipped chiefly by the lower classes. Some of them, though not mentioned in ancient literature, are celebrated in the works of modern saints.

The **Jains** in their temples, adore the sacred personages who founded and developed their sect, and venerate some of the deities common to Hinduism. But their view of Divinity is different from the Hindu conception, and in the opinion of Hindu theologians they are atheists. So also the **Buddhists** of Burma pay almost the same veneration to Prince Siddhartha as if he was a god, and indeed elevate him above the Hindu gods, but from the Hindu standpoint they are also atheists.

Images.—Besides invisible powers and deified persons, the Hindus venerate certain animals, trees and inanimate objects. This veneration must have originated in gratitude, fear, wonder, and belief in spirits as the cause of all good or harm. Some of the animals are vehicles of certain gods and goddesses—the eagle of Vishnu: the swan of Brahma: the peacock of Saraswati: Hanuman, the monkey of Rama: one serpent upholds the earth, another makes Vishnu's bed: elephants support the ends of the universe, besides one such animal being Indra's vehicle: the goddess Durga or Kali rides on a tiger: one of Vishnu's incarnations was partly man and partly lion. The cow is a useful animal: to the Brahman vegetarian her milk is indispensable, and he treats her as his mother. So did the Rishi of old, who often subsisted on milk and fruits and roots. To the agriculturist cattle are indispensable. The snake excites fear. Stones, on which the image of a serpent is carved, may be seen under many trees by the roadside. The principal trees and plants worshipped are the Sacred Fig or Pipal, the Banyan, the Sacred Basil, the Bilva or Wood Apple, the Asoka, and the Acacia. They are in one way or another associated with some deity. The sun, the moon, and certain planets are among the heavenly bodies venerated. The ocean and certain great rivers are held sacred. Certain mountains, perhaps because they are the abodes of gods and Rishis, are holy. Pebbles from the Gandaki and the Narmada, which have curious lines upon them, are worshipped in many households and temples.

Worship.—Without going into a temple, one can get a fair idea of image worship by seeing how a serpent-stone is treated under a tree. It is washed, smeared with sandal, decorated with flowers: food in a vessel is placed before it, lamps are waved, and the worshipper goes round it, and bows down his head, or prostrates himself before the image. In a temple larger bells are used than the small ones that are brought to such a place: jewels are placed on the idol: and the offerings are on a larger scale. Idols are carried in public procession in palanquins or cars. The lower classes sacrifice animals before their gods and goddesses.

Domestic Life.—Of the daily domestic life of the people a tourist cannot see much. He may see a marriage or funeral procession. In the former he may notice how a bridegroom or bride is decorated: the latter may shock him, for a Hindu dead body is generally carried on a few pieces of bamboo lashed together: a thin cloth is thrown over it and the body is tied to the frame. The Mahomedan bier is more decent, and resembles the Christian coffin. Some Hindus, however, carry the dead to the burial ground in a palanquin with great pomp. The higher castes cremate the dead: others bury them. Burial is also the custom of the Muslims, and the Parsis expose the dead in Towers of Silence.

Indian Names.

The personal name of most Hindus denotes a material-object, colour, or quality, an animal, a relationship, or a deity. The uneducated man, who cannot correctly pronounce long Sanskrit words, is content to call his child, father, brother, uncle, or mother, or sister, as the case may be. This practice survives among the higher classes as well. Appa Saheb, Anna Rao, Babaji, Bapu Lal, Bhai Shankar, Tatacharya, Jijibhai, are names of this description, with honorific titles added. It is possible that in early society the belief in the re-birth of departed kinsmen lent popularity to this practice. Nothing could be more natural than to call a man white, black, or red: gold or silver: gem, diamond, ruby, pearl, or merely a stone: small or tall, weak or strong: a lion, a snake, a parrot, or a dog: and to name a woman after a flower or a creeper. Thus, to take a few names from the epics, Pandu means white, and so does Arjuna: Krishna black: Bhima terrible: Nakula a mongoose: Shunaka a dog: Shuka a parrot: Shringa a horn. Among the names prevalent at the present day Hira is a diamond: Ratna or Ratan a jewel: Sonu or Chinna gold: Velli or Belli, in the Dravidian languages, means white metal or silver. Men are often called after the days of the week on which they were born, and hence they bear the names of the seven heavenly bodies concerned. When they begin to assume the names of the Hindu deities, they practically enter upon a new stage of civilisation. It is doubtful whether the Animists ever venture to assume the names of the dreaded spirits worshipped by them. To pronounce the name of a devil is to invite him to do harm. If the spirits sometimes bear the names of human beings, the reason seems to be that they were originally human.

High-caste practices.—The high caste Hindu, on the other hand, believes that the more often the name of a deity is on his lips, the more merit he earns. Therefore he deliberately names his children after his gods and goddesses, so that he may have the opportunity of pronouncing the holy names as frequently as possible. These are also sonorous and picturesque. Shiva is happy: Vishnu is a pervader: Govinda is the cowherd Krishna: Keshava has fine hair: Rama is a delighter: Lakshmana is lucky: Narayana produced the first living being on the primeval waters: Ganesha is the Lord of Shiva's hosts: Dinakara is the luminary that makes the day: Subrahmanya is a brother of Ganesha. Sita is a furrow: Saitri a ray of light: Tara a star: Radha prosperity: Rukmini is she of golden ornaments: Bhama of the glowing heart. Shiva and Vishnu has each got at least a thousand names, and they may be freely drawn upon and paraphrased in naming one's children; and the whole Hindu pantheon is as crowded as it is large. When a mother loses several children, she begins to suspect that some evil spirit has conspired against her and in order to make her off-spring unattractive to the powers of darkness, she gives them ugly names, such as Keru, rubbish, or Ukirda, dunghill, or Martoba, the mortal. Women are named after rivers, as Sarasvati, Ganga, Bhagirathi, Godavari, or Kaveri, just as men are sometimes called after mountains. Manu counsels young men not to choose a wife with such a name, perhaps because a river is an emblem of deviousness and inconstancy, as a hill is an emblem of stability. But the names of rivers have not been discarded. The Burmans have a curious custom: if a child is born on a Monday, his name must begin with a guttural, on Tuesday with a palatal, on Thursday with a labial, on Saturday with a dental.

Family names.—When a person rises in importance, he adds to his personal name a family or caste name. It was once the rule that the title Sharma might be added to a Brahman's name, Varma to a Kshatriya's, Gupta to a Vaishyas, and Dasa to a Shudra's. This rule is fairly well observed in the case of the first two titles, but the meaning of the other two has changed. Dasa means a slave or servant, and the proudest Brahman cannot disdain to call himself the servant of some god. Thus, although Kalidas, the famous poet, was a Shudra, Ramadas, the famous guru of Shivaji, was a Brahmin. The Vaishnavas have made this fashion of calling oneself a servant of some god exceedingly popular, and in Western India high caste Hindus of this sect very commonly add Das to their names. The Brahmans of Southern India add Aiyer or Aiyangar to their names. Shastri, Acharya, Bhat, Bhattacharya, Upadhyaya, Mukhopadhyaya, changed in Bengal into Mukerji, are among the titles indicative of the Brahmanical profession of studying and teaching the sacred books. Among warlike classes, like the Rajputs and Sikhs, the title Singh (lion) has become more popular than the ancient Varma. The Sindhi Mal, as in Gidumal, means brave and has the same force. Raja changed into Raya, Rao and Rai was a political title, and is not confined to any caste. The Bengali family names, like Bose and Ghose, Dutt and Mitra, Sen and Guha, enable one to identify the caste of their bearers, because the caste of a family or clan cannot be changed. Shet, chief of a guild or a town, becomes Chetty, a Vaishya title, in Southern India. Mudaliyar and Nayudu, meaning leaders, are titles which were assumed by castes of political importance under native rulers. Nayar and Menon are the titles of important castes in Malabar. Ram, Lal, Nand, Chand, are among the additions made to personal names in Northern India. Suffixes like Ji, as in Ramji or Jamshedji, the Kanarese Appa, the Telugu Garu, the feminine Bai or Devi, are honorific. Prefixes like Babu, Baba, Lala, Sodhi, Pandit, Raja, and the Burmese Maung are also honorific.

Professional names.—Family names sometimes denote a profession: in some cases they might have been conferred by the old rulers. Mehta, Kulkarni, Deshpande, Chitnavis, Mahalnavis are the names of offices held in former times. One family name may mean a flour seller, another a cane-seller, and a third a liquor-seller. To insert the father's name between one's personal and the family name is a common practice in Western India. It is rare elsewhere. When a family comes from a certain place, the suffix 'kar' or 'wallah' is added to the name of the place and it makes a family surname in Western India. Thus we may have Chiplunkars and Suratwallahs, or without these affixes we may have Bhavnagris. Malabaris and Bilimorias, as among Parsis. Thus Vasudev Pandurang Chiplunkar would be a Hindu, whose personal name is Vasudev's father's name Pandurang, and family name derived from the village of Chiplun, is Chiplunkar. In Southern India the village name precedes the personal name. The evolution of Musalman names follows the same lines as Hindu names. But Muslims have no god or goddesses, and their names are derived from their religious and secular history. These names and titles are often as long and picturesque as Hindu appellations. The agnomens Baksh, Din, Ghulam, Khwaje, Fakir, Kazi, Munshi, Sheikh, Syed, Begum, Bibi and others, as well as honorific additions like Khan, have meanings which throw light of Muslim customs and institutions. The Parsis also have no gods and goddesses, and their personal names are generally borrowed from their sacred and secular history. Their surnames frequently indicate a profession or a place, as in the case of Hindus in Western India. Batliwallah, Readymoney, Contractor, Saklatwallah, Adenwallah and others like them are tell-tale names.

Conversions.—As a rule, a child is named soon after it is born, and in the case of males the appellation is not changed. The higher Hindu castes have a separate ceremony called the name-giving ceremony performed on the twelfth day after birth. When a girl is married in these castes, the husband's family give her a new personal name. When a boy is invested with the sacred thread and is made a twice-born, his name is not changed, but when a man joins an order of ascetics, his lay name is dropped, and he assumes a new name. So also when a Burman joins an order of monks or nuns, the lay name is superseded by a Pali name. Christian converts change their original name when they are baptised.

Indian Art.

In India there has never been so marked a separation between what are now known as the Fine Arts, and those applied to industry as was the case in Europe during the nineteenth century. As, however, Industrial art forms the subject of a special article in this book, the term Indian Art will here be confined to Architecture, Sculpture and Painting.

Historical.—The degree of proficiency attained in art by Indians prior to B. C. 250, can only be conjectured by their advancement in literature; and by the indirect evidences of indebtedness shown by the works of the historic period, to those which preceded them; or direct records of artistic work of an earlier date than B. C. 250 do not exist. The chief historic schools of architecture are as follows

Name.	Dates.	Locality of the best Examples.
Buddhist	B.C.250—A.D 750.	Ellora, Ajanta, Kali, Sanchi.
Jaina	A.D.1000—1300.	Ellora, Mount Abu, Pahtana.
Brahminica	A D. 500 to the present day.	Ellora, Elephanta, Orissa, Bhuvaneswar, Dharwar
Chalukyan	A D 1000—1200.	Umber, Somnathpur Ballur.
Dravidian	A.D.1350—1750.	Ellora, Tanjore, Madura, Tinnevelly.
Pathan	A.D 1200—1550.	Delhi, Mandu, Jaunpore.
Indo-Saracenic	A.D.1520 – 1760.	Lahore, Delhi, Agra, Amber, Bijapur.

Buddhist Architecture is mainly exemplified by the rock-cut temples and monasteries found in Western India and in the *Topes* or sacred mounds. The interior decorations, and external facades of the former, and the rails and gates surrounding the latter point unmistakably to their being derived from wooden structures of an earlier period. The characteristic features of these temples are horse-shoe openings in the facades to admit light, and colonnades of pillars with richly ornamented caps in the interior halls. Jaina Architecture is found in its most highly developed form in the Dilwara temples at Mount Abu. The ground plan consists of a shrine for the god or saint; a porch, and an arcaded courtyard with niches for images. The characteristic of the style is grace and lightness, with decorative carving covering the whole interior, executed with great elaboration and detail. Constructional methods suggest that original types in wood have been copied in marble.

Brahminical, Chalukyan and Dravidian styles differ little in essential plan, all having a shrine for the god, preceded by pillared porches. The outer forms vary. The northern Brahminical temples have a curved pyramidal roof to the shrines, which in the southern or Dravidian style are crowned by a horizontal system of storied towers, and each story, decreasing in size, is ornamental with a central cell and figures in high relief. The Chalukyan style is affected by its northern and southern neighbours, taking features from each without losing its own special characteristics of which the star-shaped plan of the shrine, with the five-fold bands of external ornament, is the principal features. Pathan Architecture was introduced into India by the Mahomedan invasion of the thirteenth century. At old Delhi are fine examples in the Kutub Mosque and Minar. The characteristics of the style are severity of outline, which is sometimes combined with elaborate decoration due, it is stated, to the employment of Hindu craftsmen. The mosques and tombs at Ahmedabad already show Hindu influence; but purer examples are to be found at Jaunpore and Mandu. Indo-Saracenic Architecture reached the climax of its development during the reigns of the Moghul Emperors, Akbar, Jehangir and Shah Jahan. It eclipsed in richness of material and refinement of taste the building efforts of previous periods, its crowning example being the Taj Mahal at Agra. The buildings erected during the Adil Shahi dynasty at Bijapur at a slightly later date, exhibit a certain Turkish influence, especially in the great tomb of Mahmoud. Though less refined and lacking the attraction of precious materials in their decoration, these splendid edifices are held in higher esteem by some critics than those of the Moghals, on account of their simplicity, grandeur and fine proportions. The era of great civil architecture in India was revived by the Mahomedan powers. Splendid palaces and fortresses were built at Madras, Delhi, Agra, Fattehpore-Sikri and Bijapur, and the example thus set was copied by the Hindu princes at Jaipur, Udaipur and elsewhere in India. The application of great architectural treatment, unequalled in extent elsewhere, is to be seen in the Ghauts or steps enclosing lakes and on the banks of rivers. The most notable constructional contribution of the Mahomedans to Indian architecture was the introduction of the true arch and dome.

Sculpture.—The use of sculpture and painting in isolated works of art was practically non-existent in India until modern times. One or two reliefs and certain gigantic figures may be quoted as exceptions, but taken generally it may be stated that these arts were employed as the decorative adjuncts of architecture. No civil statuary, such as is now understood by the term, was executed; for no contemporary portrait figures, or busts in marble, or bronze, have come down to us from the ruins of ancient India, as they have from those of Egypt, Greece and Rome. Sculpture has been used exclusively as the handmaid of religion and to this fact may be attributed the stereotyped forms to which it became bound. The lavish use of sculpture on Indian temples often exceeds good taste, and mars the symmetry and dignity of their mass and outline; but for exuberance of imagination, industrious elaboration and vivid expression of movement, Indian sculpture is perhaps without its equal elsewhere in the world. The most impressive specimens are the earliest, found in the Buddhist and Brahminical cave temples of Ellora, Ajanta and Elephanta. The great Trimurthi in the last named of these temples ranks for mystery

and expressive grandeur with the greatest masterpieces of Egyptian art. The outstanding characteristics of Hindu sculpture are the power displayed in suggesting movement; the fine sense of decorative arrangements of line and mass; and an overpowering ingenuity in intricate design. Mahomedan sculpture in India, though not exclusively confined to geometric forms as is that of the more severe Arabian school, is very restrained as compared with that of the Hindus. Floral motifs are often used in the ornaments to tombs and palaces, but rarely in those of mosques. Their geometric ornament shows great ingenuity and invention; and wonderful decorative use is made of Persian, Arabic and Urdu lettering in panels, and their borders. The representation of human or animal figures is rarely to be met with. Sculptured and modelled relief is, as a rule, kept very low; and is mainly confined to the decoration of mouldings, architraves, lintels, or the bands of ornament which relieve large exterior wall spaces. Buildings of purely Mahomedan design and workmanship show greater restraint than those upon which Hindu workmen have been employed and are more satisfactory; but at Ahmedabad the two celebrated windows are striking examples of a happy combination of the two styles.

Painting.—Much of the carved stonework upon ancient Indian buildings was first plastered and then decorated with colour, but the only paintings, in the modern acceptation of the term, now existing, which were executed prior to the Moghul period, are those upon the walls of the cave temples at Ajanta. These remarkable works were produced at intervals during the first 600 years of the Christian era. They exhibit all the finer characteristics of the best Indian sculpture, but with an added freedom of expression due to the more tractable vehicle employed. They remained hidden in the Deccan jungles for nearly twelve hundred years, until accidentally discovered in 1816. They are painted in a species of fresco; and when first brought to light were well preserved, but they have greatly deteriorated owing to the well meant, but misguided action of copyists, and the neglect of the authorities. Their origin is as wrapt in mystery as is that of the artists who painted them; for no other paintings of similar power and character are known to exist; and the artists, so far as is known, left no successors. Nine hundred years elapsed between the completion of the Ajanta paintings and the commencement of the second period of Indian painting. This owned its origin to the introduction of Persian artists by the Moghul Emperor Akbar; and the establishment of the indigenous Moghul school was due to the encouragement and fostering care of his successors, Jehangir and Shah Jahan. Unlike the works of the Ajanta painters, which were designed upon a large scale, the pictures of the Moghul school were miniatures. They were executed in a species of opaque water-colour upon paper or vellum, resembling in technique the illuminated missals produced by the monks in Europe during the middle ages. Some of the finest of the earlier specimens in India are of a religious character; this phase of development being closely allied to the art the caligraphist. As its range extended, a remarkable school of portrait painters arose; notable for restrained but extremely accurate drawing, keen insight into character, harmonious colour, fine decorative feeling, and extraordinary delicacy and finish in the painting of detail. The artists of a Hindu off-shoot of this movement, known as the Rajput school, were less fully endowed with the technical and purely aesthetic qualities than were the Moghul painters; but they brought to their work poetry and sentiment which are not to be found in that of the Mahomedans. The pictures of both branches of the Moghul school, although highly decorative in character, were not intended for exhibition upon the walls of rooms, according to Western practice, and, when not used as illustrations or decorations to manuscript books, were preserved in portfolios. As this school of painting was the last expression of traditional art in India, in the restricted sense here applied to the term, and, as the question has a distinct bearing upon the modern development of painting, a few words may be added regarding the difference between the conventions followed by Eastern and Western painters. Until the middle of the fourteenth century the conventions of both East and West were practically the same, though the use of them differed according to environment and national temperament. These conventions the artists of the East have retained; and development has been upon the line of decorative fitness, harmony of colour, and expressive action. Their art has throughout been decorative, and when natural objects have been depicted, their treatment has been that of a flat pattern. The European painters, after the period above mentioned on the contrary, sought to attain the appearance of actuality in the objects depicted by the study of the science of light and shade, and perspective; and in achieving this end, and developing it into the realisation of atmosphere and light, they sacrificed a large measure of the decorative quality which characterised the work of the earlier school. Eastern artists have ignored or been blind to light and shade; and in works entirely free from European influence one will look in vain for any suggestion of it in their figures or for shadows of objects cast upon the ground. During the last fifty years there has been a strong movement toward a return to decorative conventions, on the part of European artists who have assimilated much that the East has to teach them, without thereby affecting the distinctively Western character of their work. Indian and Japanese artists have been less successful when attempting the reverse of this practice, and appear to lose whatever is best in their traditional practice without acquiring the finer qualities of that of the West.

Modern Painting.—As the reign of Shah Jahan exhibits the high tide of artistic development in India, so the reign of his successor Aurangzeb marks the period of its rapid decline. The causes of this are attributable to the absence of encouragement by this Emperor; to his long periods of absence from the court at Delhi or Agra, entailed by the continuous wars he waged in his efforts to bring the whole of the Peninsula under his rule; and partly to the tendency strongly inherent in the Indian artist

to become stereotyped in his practice. All foreign designers, painters and craftsmen who had been attracted to India by the great works carried out by Akbar, Jehangir and Shah Jahan left the country, and their places were taken by no successors. The indigenous artists left to themselves in the isolated courts of small Indian princes, or collected in schools in remote districts, employed themselves mainly upon repeating the works of a previous age, instead of seeking new motifs for artistic treatment. So purely mechanical did the work become that in some of the schools or guilds of painters, the execution of a single picture was subdivided; one craftsman painting the face, a second the drapery, and a third the background. Such methods could only lead to deterioration and decay. At the time when the British East India Company ceased to be only a guild of merchants and became a great administrative power in 1757, very little vitality survived in the ancient art of the country. During the century of its administrative history between the battle of Plassey and the Indian Mutiny, the "Company" was too fully occupied in fighting for its existence, extending its borders and settling the internal economy of its ever increasing territories, to be able to give much attention to conserving any remnant of artistic practice which had survived. Without any deliberate intention of introducing western art into the country, Greek and its derivative styles of architecture were adopted for public and private buildings in Calcutta, Bombay and Madras because these were found to be more suitable for their purpose than buildings of indigenous pattern. The practical result was the same; for the Indian craftsmen employed upon their erection were confronted with styles affording no scope for the application of their traditional ornament and concerning which they had no knowledge or sympathy. As there were no sculptors in India capable of modelling or carving civil sculpture, the monuments to distinguish public servants were all imported from England; and the portraits, or other paintings which decorated the interior walls of the buildings, were furnished by European painters who visited India or by artists in England. Although a considerable amount of research work of a voluntary nature was done by Archæologists, no official interest was taken in artistic education until the Government of India was transferred to the British Crown in 1859. In England itself, the first fifty years of the nineteenth century was a period of gross commercialism and artistic degradation; but with the advent of the International Exhibition of 1851 the eyes of the nation were opened to the value of art as applied to industry.

The **Schools of Art** then instituted throughout England were imitated in a timid and tentative manner in India; and were attached to the educational system, which had been previously modelled upon a definitely European basis. These schools of art, it should be remembered, were specially established to assist the artistic industries of the country, and not to provide instruction in architecture, sculpture and painting. In fact at a subsequent period they narrowly escaped extinction by the Secretary of State, upon the ground that they had become schools of painting and had thus been diverted from performing the original function for which they were established. The work of the Schools of Art in regard to industrial art is referred to elsewhere; and as two of them, that at Madras and that at Lahore, have confined their activities almost exclusively to this branch of the subject it is necessary to mention only the work of the Schools at Calcutta and Bombay in the present article. The Calcutta school, except for occasional experiments in the application of the graphic arts to lithography, engraving and stained glass, has become a school of painting and drawing. That at Bombay covers a wider field; for in addition to classes for modelling, painting and design it possesses a special school of architecture; a range of technical workshops, in which instruction is given in the applied arts; and research laboratories and studios devoted solely to the improvement of the Pottery industry. It is in the principles underlying the instruction in painting that the schools at Calcutta and Bombay have taken almost diametrically opposite roads to reach the end they both have in view, namely, the revival of the art of painting in India by means of an indigenous school of Indian painters. Mr. Havell, who until a few years back was the Principal of the Calcutta School, banished from within its walls every vestige of European art; and claimed that the traditional art of India, in its old forms, is not dead, but merely sleeping or smothered by the blanket of European culture laid upon it for the last 150 years, and needed but to be released from this incubus to regain its pristine vigour. Well equipped with literary ability; backed by intense enthusiasm for the views he held, which he advocated with admirable persistence; he imposed upon his students an exclusive and severe study of the Moghul and Rajput schools of painting. He was fortunate in finding a willing and equally enthusiastic disciple in Mr. Abinandranath Tagore, an artist of fine imagination and fancy, endowed with technical ability of a high order, combined with a serious devotion to his art. He with other Bengal painters, inspired by Mr. Havell's precepts, founded, about fifteen years ago, what has since become known as the Calcutta School of painting. In their early work the painters of this school closely adhered to the conventions of Moghul and Rajput artists, whom they took as their models; and these early examples made a great impression upon all European critics who saw them. They were welcomed as the first sign of a genuine revival of Indian painting, based upon traditional lines, and it was confidently hoped that the movement would meet with the support it merited from Indians of all classes. Interesting as many individual works of the school undoubtedly are the anticipations which greeted its inception have scarcely been fulfilled by the Calcutta school. The painters themselves have never reached the high technical standard of the artists who produced the best works of the Moghul or Rajput school: and, as time has passed, their outlook appears to have shifted, and, while stemming the flood of western influence, they appear to have drifted into a backwater of Japanese conventions. The Indian public has failed to give the school the support it was hoped they would afford, and the movement has had to depend for encourage-

ment mainly upon Europeans in England and India.

Bombay School of Art.—The attitude towards the development of art in modern India taken by Mr. Cecil Burns, who long guided the policy of the Bombay school, was diametrically opposite to that favoured by Mr. Havell. While yielding to no one in his admiration for the ancient art of India, and giving every encouragement to his students to study its masterpieces, the view he takes is that with European literature dominating the system under which the educated classes in India are trained; with European ideas, and science permeating the professional, commercial, industrial, and political life of the country, it is not possible for modern Indians now to recapture the spirit which alone gave vitality to the great works of the past ; that without this spirit, the conventions the ancient artists adopted are mere dead husks; and that to copy these would be as unprofitable as it would be for the artists of Europe to harness themselves to the conventions of the Greek and Roman sculptors or to those of the mediæval painters; that with European pictures,often of inferior quality illustrating every educational text book, and sold in the shops of every large city, it is essential for the proper education of art students that they should have before them the masterpieces of European art ; and that, with the wide adoption of European styles of architecture in India, it is necessary for a school of art to possess the best examples of ornament applicable to the great historic styles, for the purpose of study and reference. There are certain basic principles common to the technique of all great art, such as fine and accurate drawing in its widest sense, composition and design, and the science of colour harmony. By means of these an artist can express his individuality and emotions, and Mr. Burns held that the main function of a School of Art is to equip its students with the power of expression, untrammelled by any set conventions, so that when they leave the school, they do so with the capacity to employ their faculties in any direction their sympathies and tastes may impel them to take. Which of these two very divergent theories will produce the result both these gentlemen unite in wishing to see brought to pass, time alone will show. Certain it is that the driving fore of any artistic impulse must come from within the nation, and that India, like every other country, in its art, as in other matters, must work out its own salvation.

One striking success of hopeful augury has been achieved by the Bombay School in recent years This is the establishment of a flourishing school of architecture in which the study of Indian architecture takes an important place. Connected with this school is a students' architectural association designed to keep past students in touch with the school and with one another. As architecture embraces and influences every branch of decorative and industrial art, it is to be hoped that this school may be the means whereby the ancient glories of Indian architecture will be some day revived in new forms, bringing in its train a vitalising influence upon every other form of artistic activity.

Mural Painting.—Mr. W. E. Gladstone Solomon, the present Principal, has during the last two years studiously avoided any dogmatic theories as to the ultimate and which Indian art is destined to attain, though he has consistently pointed out the Indian's pre-eminence in the decoration of wall spaces. The guiding principle with Mr. Solomon has been to teach the students to draw and to paint what they see ; and further to encourage by all possible means their natural progress in the direction towards which their inherent instinct most obviously urges them. The application of this close training in the study of form and colour from the life to a decorative purpose, which accords both with ancient traditions and modern manifestations of the Indian artistic genius, has recently taken a definite line in the production of the mural paintings executed by the students at Government House and elsewhere in Bombay. These paintings are admitted by all critics to be of most hopeful augury for the future of Indian art clearly demonstrating as they do the capacity of our young Indian artists to grapple with the exacting problems of figure composition and to carry them out on a comprehensive scale.

Travel in India.

Thirty years ago, a tour in India was possible only to the wealthy, the leisured and those who had friends in the country. The cost of the journey was very high, the methods of transportation were very slow; and the facilities for travel were so indifferent that he was a bold man who consigned himself to the mercies of the country without a sheaf of letters of introduction. Now the mail which in peace time is posted in London on Friday night, reaches Bombay in thirteen and a half days, and the passenger can travel by the same route and with the same speed as the mail. A dozen lines have covered the sea route between Europe and India and Ceylon with a plexus of regular services. The Indian Railways provide facilities on the trunk lines unsurpassed by the *trains-de-luxe* of Europe, and the Indian hotel has grown into a really comfortable caravanserai.

In the touring season, which extends from November to March, there is the attraction of a perfect climate. It is never very hot; in the North indeed it is really cool, it is always fine and fresh and bracing. If there is one country in the world to which that elusive term applies, here we have at the season when the tourist arrives the real "Indian summer." Then there is its infinite variety. India is in no sense a nation and never will be. Its peoples are wide as the Poles asunder, each has its own art, its own architecture, its own customs and its own civilisation. A certain superficial resemblance runs through each; beneath lies a never-ending variety which age cannot wither nor custom stale.

The Grand Tour.—People coming to India for the first time so often ask:—"Where shall I go?" Well, wherever else the tourist may go, whatever else he should leave out, he should omit nothing on the Grand Tour. It is the foolish custom nowadays to sneer at those who follow the beaten tracks, but the visitor who shuns any part of the orthodox journey across India misses what nothing else can repay. **Bombay** is by far the most convenient point of departure, for here "the world end steamers wait," here is one of the finest cities in the British Empire, and here the traveller can best complete his outfit and arrangements. From Bombay stretch northwards the two great trunk lines of India. One, the **Bombay Baroda & Central India Railway**, leads through the pleasant garden of Gujarat to Ahmedabad, the ancient Moslem capital of the Province containing fine examples of Mahomedans and Jain architecture; thence to Abu for the famous Jain temples of Dilwara, and on to Ajmere, Jaipur and Agra. The other by the **Great Indian Peninsula Railway** carries the tourist over the Western Ghats by a superb mountain railway to Gwalior, whose rock fortress rises like a giant battleship from the plain, and so on to Agra. Of the glories of the Taj Mahal, Agra Fort, and the deserted city of Fatehpur Sikri it were supererogatory to speak. Another easy stage leads to **Delhi** that amazing collection of cities, dominated by the little Ridge where British valour kept the mutinous hordes at bay, and finally drove them from the city by a feat of arms unsurpassed in history. Then from Delhi the East Indian line leads comfortably to Benares, Lucknow and Calcutta, with the opportunity of an excursion to Cawnpore, if the spirit moves. The great charm of the Grand Tour is that it reveals the best that India can show. This route has the additional advantage that it fits in with any digressions which the time and purse of the traveller may permit. No one who can spare the time should fail to push northwards from Delhi to Peshawar, where the flower of the army keeps watch and ward over the Khyber, and up the dread Pass to the eyrie where the fort of Ali Masjid bars the way to all invaders. **Calcutta** is the best starting point for Darjeeling, though unfortunately the magnificent mountain panorama visible from there is often obscured at this season by mists. Then from Calcutta two alternatives open. A fine service of mail steamers leads to **Burma**, and one of the unforgettable memories of the East is a voyage down the Irrawaddy from Bhamo or Mandalay to Prome. Again, either direct from Calcutta, or *via* Burma, is an easy route to **Madras** and by way of Madura and Trichinopoly, with their peerless Hindu temples, back to Bombay, or on through Tuticorin to **Colombo.** But indeed the possibilities of expanding this tour are endless. Bombay is the best centre for the rock temples of Elephanta, Kenheri, Karli, Ellora and Ajanta. Calcutta is only a short distance from Puri the one Indian temple where there is no caste, and perhaps the most remarkable Hindu temple in the country. From Calcutta also start the river steamers which thread the steamy plains of Bengal and run to the tea gardens of Assam.

SPECIMEN TOURS.

A number of specimen tours in India are given below. They are taken from one of Messrs. Thos. Cook & Son's publications, from which firm further information may be obtained. The

traveller will also find he can obtain assistance from the principal Shipping Agents and Railway Companies, or from Messrs. Cox & Co., Messrs. Grindlay & Co., and Messrs King, King & Co.

	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM BOMBAY TO CALCUTTA.	Rs. a.	Rs. a.
Via the North-West Provinces to Calcutta (including side trip from Calcutta to Darjeeling).		
TOUR I.—From Bombay per B. B. & C. I. Railway *via* Ahmedabad, Abu Road (for Mount Abu), Ajmer, Jaipur, Delhi, Agra, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	279 10	139 14
TOUR II.—From Bombay per G. I. P. Railway *via* Itarsi, Gwalior, Agra, Delhi, Tundla Junction, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	279 0	139 8
FROM BOMBAY TO COLOMBO.		
Via the North-West Provinces, Calcutta and Southern India to Colombo (including side trip from Calcutta to Darjeeling).		
TOUR III.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence *via* Khurda Road, for Puri (Juggannath), Madras, Tanjore, Trichinopoly, Madura, Danushkodi and Talaimannar to Colombo	464 6	233 0
TOUR IV.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence as in Tour No. III to Colombo (*via* Southern India)	464 0	233 0
Via the North-West Provinces, Calcutta (including Darjeeling), Burma and Southern India.		
TOUR V.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay. Irrawaddy Steamer to Prome, Rail to Rangoon; British India Steamer to Madras, Rail *via* Tanjore, Trichinopoly, Madura to Danushkodi; Steamer to Talaimannar and Rail to Colombo ..	661 10	370 8
TOUR VI.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, thence as in Tour No. V to Colombo	661 0	370 2
FROM BOMBAY TO RANGOON.		
Via the North-West Provinces and Calcutta to Rangoon (including a tour in Burma, also including a side trip from Calcutta to Darjeeling).		
TOUR VII.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay, Irrawaddy Steamer to Prome, Rail to Rangoon	573 8	316 0
TOUR VIII.—From Bombay as in Tour II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon. Rail to Mandalay, Irrawaddy, Steamer to Prome, Rail to Rangoon	573 0	315 8

	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM CALCUTTA TO BOMBAY. *Via the North-West Provinces.*	Rs. a.	Rs. a.
TOUR IX.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu), Ahmedabad and Baroda to Bombay	175 10	89 6
TOUR X.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu) Ahmedabad and Baroda to Bombay	176 0	88 0
TOUR XI.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Gwalior and Itarsi to Bombay..	158 11	79 5
TOUR XII.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Delhi, Muttra, Agra, Gwalior and Itarsi to Bombay	180 4	90 2
CIRCULAR TOUR FROM CALCUTTA.		
TOUR XIII.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Bandikui, Jaipur, Delhi, and Allahabad to Calcutta	200 6	100 4
Extensions, Via Southern India to Colombo.		
TOUR XIV.—From Bombay *via* Poona, Hyderabad, Wadi, Raichur, Madras, Tanjore, Trichinopoly. Madura, Danushkodi, and Talaimannar to Colombo	191 0	96 0
TOUR XV.—From Bombay *via* Poona, Hyderabad, Wadi, Guntakal, Bangalore, Erode, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	184 10	92 12
Extensions to above Tours.		
From Ajmer to Udaipur and return	46 4	23 2
From Abu Road to Mount Abu and return, one seat in motor (This excursion is strongly recommended, the scenery being very beautiful) ..	20 0	....
From Delhi to Lahore and return *via* Umballa and Amritsar	58 2	29 2
From Delhi *via* Bhatinda, Ferozepore to Lahore, returning *via* Amritsar Umballa to Delhi	56 15	28 8
From Calcutta to Darjeeling and return	101 0	50 8
From Colombo to Kandy and return	13 12	9 3
From Kurda Road to Puri (Jagganath) and return	7 0	3 8

(All fares subject to change without previous notice.)

LIST OF HOTELS IN INDIA.

The following list of hotels is largely based on information kindly supplied by Messrs. Thos. Cook & Son, Bombay :—

AGRA.—Cecil, Laurie's Great Northern, Metropole.
AHMEDABAD.—Grand.
ALLAHABAD.—Grand Central.
BANGALORE.—West End, Cubbon.
BELLARY.—Royal.

BENARES.—Clark's, Hotel de Paris.
BOMBAY.—Taj Mahal, Majestic, Metropole, Apollo, Watson's.
CALCUTTA.—Great Eastern, Grand, Spence's, Continental.

CAWNPORE.—Civil and Military.
DELHI.—Maiden's, Cecil, Woodland's, Brandon's, Northern.
GOA.—Crescent.

GULMARG.—Nedou's.
GWALIOR.—Gwalior Hotel.

HYDERABAD (Deccan).—Montgomery's.
JEYPORE.—Jeypore, Kaisar-i-Hind, The New Hotel.
JUBBULPORE.—Jackson's
KARACHI.—North-Western, Killarney.

LAHORE.—Nedou's, Cecil.
LUCKNOW.—Royal, Carlton, Civil and Military.
MADRAS.—Hotel D'Angelis, Connemara, Brind'.
MANDALAY.—Salween House.
MEERUT.—Empress.

PESHAWAR.—Flashmans.
POONA.—Napier, Poona, Connaught.
RANGOON.—Strand, Royal, Minto Mansions.
RAWAL PINDI—Flashmans, Imperial.
SECUNDERABAD—Montgomery's, Majestic.

HOTELS IN PRINCIPAL HILL STATIONS:—
COONOOR.—Glenview.
DARJEELING.—Woodland's, Mount Everest, Grand (Rockville), Drum Druid, Central.
MAHABLESHWAR.—Race View.
MASHOBRA.—Wild Flower Hall
MATHERAN.—Rugby, Granville.
MOUNT ABU—Rajputana, Karundas.
MURREE.—Viewforth.
MUSSOORIE.—Charleville, Savoy, Cecil, Grand Central.
NAINI TAL.—Metropole, Grand
OOTACAMUND.—Sylk's, Centre, Firgrove.
PACHMARHI.—Hill.
SIMLA.—Corstorphon's, Grand, Laurics Longwood, Faletti's, Royal.

An Indian Glossary.

ABKARI.—Excise of liquors and drugs.

AIN.—A timber tree TERMINALIA TOMENTOSA.

AMIL—A subordinate executive official under native rule; in Sind the name is still applied to Hindus of the clerical class

ANICUT—A dam or weir across a river for irrigation purposes, Southern India.

ANJUMAN.—A communal gathering of Mahomedans.

APHUS.—Believed to be a corruption of ALPHONSE, the name of the best variety of Bombay mango.

AUS.—The early rice crop, Bengal, syn Ahu, Assam.

AVATAR.—An incarnation of Vishnu.

BABU.—(1) A gentleman in Bengal, corresponding to Pant in the Deccan and Konkan. (2) Hence used by Anglo-Indians of a clerk or accountant.

BABUL—A common thorny tree, the bark of which is used for tanning, ACACIA ARABICA

BAGHLA.—(1) A native boat (Buggalow). (2) The common pond heron or paddybird.

BAIRAGI—A Hindu religious mendicant

BAJRA OR BAJRI—The bulrush millet, a common food-grain, PENNISETUM TYPHOIDEUM; syn. cambu, Madras.

BAND.—A dam or embankment (Bund).

BANYAN—A species of fig-tree, FICUS BENGALENSIS.

BARSAT.—(1) A fall of rain, (2) the rainy season.

BASTI.—(1) A village, or collection of huts; (2) A Jain temple, Kanara

BATTA.—Lit. 'discount' and hence allowances by way of compensation.

BAZAR.—(1) A street lined with shops, India proper; (2) a covered market, Burma.

BER—A thorny shrub bearing a fruit like a small plum, ZIZYPHUS JUJUBA.

BEWAR—Name in Central Provinces for shifting cultivation in jungles and hill-sides; syn. taungya, Burma; jhum, North-Eastern India.

BHADOI.—Early autumn crop, Northern India, reaped in the month Bhadon.

BHANG.—The dried leaves of the hemp plant, CANNABIS SATIVA, a narcotic.

BHANWAR.—Light sandy soil; syn. bhur.

BHARAL.—A Himalayan wild sheep, OVIS NAHURA.

BHENDI.—A succulent vegetable (HIBISCUS ESCULENTUS).

BHUSA.—Chaff, for fodder.

BHUT.—The spirit of departed persons.

BIDRI.—A class of ornamental metalwork, in which blackened pewter is inlaid with silver, named from the town of Bidar, Hyderabad.

BIGHA.—A measure of land varying widely; the standard bigha is generally five-eights of an acre.

BIR (BID)—A grassland—North India.

BLACK COTTON SOIL—A dark-coloured soil, very retentive of moisture, found in Central and Southern India.

BOARD OF REVENUE.—The chief controlling revenue authority in Bengal, the United Provinces and Madras

BOR—See BER.

BRINGAL—A vegetable, SOLANUM MELONGENA; syn. egg-plant.

BUNDER, or bandar—A harbour or port.

BURUJ—A bastion in a line of battlements.

CADJAN—Palm leaves used for thatch.

CHABUTRA—A platform of mud or plastered brick, used for social gatherings, Northern India.

CHADAR—A sheet worn as a shawl by men and sometimes by women. (Chudder)

CHAITYA.—An ancient Buddhist chapel.

CHAMBAR (CHAMAR).—A caste whose trade is to tan leather.

CHAMPAK.—A tree with fragrant blossoms, MICHELIA CHAMPACA.

CHAPATI—A cake of unleavened bread. (Chaupatti)

CHAPRASI.—An orderly or messenger, Northern India; syn. pattawala, Bombay; peon, Madras.

CHARAS—The resin of the hemp plant CANNABIS SATIVA, used for smoking.

CHARKHA.—A spinning wheel.

CHARPAI (charpoy)—A bedstead with four legs, and tape stretched across the frame for a mattress.

CHAUDHRI.—Under native rule, a subordinate revenue official; at present the term is applied to the headman or representative of a trade guild.

CHAUKIDAR.—The village watchman and rural policeman.

CHAUTH.—The fourth part of the land revenue, exacted by the Marathas in subject territories.

CHELA.—A pupil, usually in connexion with religious teaching.

CHHAONI.—A collection of thatched huts or barracks; hence a cantonment.

CHHATRI.—(1) An umbrella, (2) domed building such as a cenotaph.

Note.—According to the Hunterian system of transliteration here adopted the vowels have the following values:—a either long as the a in 'father' or short as the u in 'cut,' e as the ai in gain,' i either short as the i in 'bib,' or long as the ee in 'feel,' o as the o in 'bone,' u either short as the oo in 'good,' or long as the oo in 'boot,' ai as the i in 'mile,' au as the ou in 'grouse. This is only a rough guide. The vowel values vary in different parts of India in a marked degree. The consonantal values are too intricate for discussion here.

CHIEF COMMISSIONER.—The administrative head of one of the lesser Provinces in British India.

CHIKOR.—A kind of partridge, CACCABIS CHUCAR.

CHIKU.—The Bombay name for the fruit of ACHRAS SAPOTA, the Sapodilla plum of the West Indies.

CHINAR.—A plane tree, PLATANUS ORIENTALIS.

CHINKARA.—The Indian gazelle, GAZELLA BENNETTI, often called 'ravine deer.'

CHITAL.—The spotted deer, CERVUS AXIS.

CHOLAM.—Name in Southern India for the large millet, ANDROPOGON SORGHUM; syn. jowar.

CHOLI.—A kind of short bodice worn by women.

CHUNAM, chuna.—Lime plaster.

CIRCLE.—The area in charge of—(1) A Conservator of forests; (2) A Postmaster or Deputy Postmaster-General; (3) A Superintending Engineer of the Public Works Department.

CIVIL SURGEON.—The officer in medical charge of a District.

COGNIZABLE.—An offence for which the culprit can be arrested by the police without a warrant.

COLLECTOR.—The administrative head of a District in Regulation Provinces corresponding to the Deputy Commissioner in non-regulation areas.

COMMISSIONER.—(1) The officer in charge of a Division or group of Districts; (2) the head of various departments, such as Stamps, Excise, etc.

COMPOUND.—The garden and open land attached to a house. An Anglo-Indian word perhaps derived from 'kumpan', a hedge.

CONSERVATOR.—The Supervising Officer in charge of a Circle in the Forest Department.

COUNCIL BILLS.—Bills or telegraphic transfers drawn on the Indian Government by the Secretary of State in Council.

COUNT.—Cotton yarns are described as 20's, 30's, etc., counts when not more than a like number of hanks of 840 yards go to the pound avoirdupois.

COURT OF WARDS.—An establishment for managing estates of minors and other disqualified persons.

CRORE, karor.—Ten millions.

DAFFADAR.—A non-commissioned native officer in the army or police.

DAH OR DAO.—A cutting instrument with no point, used as a sword, and also as an axe, Assam and Burma.

DAK (dawk).—A stage on a stage coach route. Dawk bungalow is the travellers' bungalow maintained at such stages in days before rail ways came.

DAKAITI, DACOITY.—Robbery by five or more persons.

DAL.—A generic term applied to various pulses.

DAM.—An old copper coin, one-fortieth of a rupee.

DARBAR.—(1) A ceremonial assembly, especially one presided over by the Ruler of a State hence (2) the Government of a Native State.

DARGAH.—A Mahomedan shrine or tomb of a saint.

DARI., Dhurrie—A rug or carpet, usually of cotton, but sometimes of wool.

DAROGHA.—The title of officials in various departments; now especially applied to subordinate controlling Officers in the Police and Jail Departments.

DARWAN.—A door-keeper.

DARWAZA.—A gateway.

DEBOTTAR.—Land assigned for the upkeep of temples or maintenance of Hindu worship.

DEODAR.—A cedar, CEDRUS LIBANI or C. DEODARA.

DEPUTY COMMISSIONER.—The Administrative head of a District in non-regulation areas corresponding to the Collector in Regulation Provinces.

DEPUTY MAGISTRATE AND COLLECTOR.—A subordinate of the Collector, having executive and judicial (revenue and criminal) powers; equivalent to Extra Assistant Commissioner in non-regulation areas.

DESAI.—A revenue official under native (Maratha) rule.

DESH.—(1) Native country; (2) the plains as opposed to the hills, Northern India; (3) the plateau of the Deccan above the Ghats.

DESHMUH.—A petty official under native (Maratha) rule.

DEVA.—A deity.

DEVASTHAN.—Land assigned for the upkeep of a temple or other religious foundation.

DEWAN.—See DIWAN.

DHAK.—A tree, BUTEA FRONDOSA, with brilliant orange-scarlet flowers used for dyeing, and also producing a gum; syn. palas, Bengal and Bombay; Chhiul, Central India.

DHAMANI – A heavy shighram or tonga drawn by bullocks.

DHARMSALA.—A charitable institution provided as a resting-place for pilgrims or travellers, Northern India.

DHATURA.—A stupefying drug, DATURA FASTUOSA.

DHENKLI.—Name in Northern India for the lever used in raising water; syn. picottah.

DHOBI.—A washerman.

DHOTI.—The loincloth worn by men.

DISTRICT.—The most important administrative unit of area.

DIVISION.—(1) A group of districts for administrative and revenue purposes, under a Commissioner; (2) the area in charge of a Deputy Conservator of Forests, usually corresponding with a (revenue) District; (3) the area under a Superintendent of Post Offices; (4) a group of (revenue) districts under an Executive Engineer of the Public Works Department.

DIWAN.—The chief minister in a Native State.

DIWANI.—Civil, especially revenue, administration; now used generally in Northern India of civil justice and Courts.

DOAB.—The tract between two rivers, especially that between the Ganges and Jumna.

DRY CROP.—A crop grown without artificial irrigation.

DRY RATE.—The rate of revenue for unirrigated land.

DUN.—A valley, Northern India.

EKKA.—A small two-wheeled conveyance drawn by a pony, Northern India.

EXTRA ASSISTANT COMMISSIONER.—See Deputy Magistrate and Collector.

FAKIR.—Properly an Islamic mendicant or a mendicant who has no creed, but often loosely used of Hindu mendicants also.

FAMINE INSURANCE GRANT.—An annual provision from revenue to meet direct famine expenditure, or the cost of certain classes of public works, or to avoid debt.

FARMAN.—An imperial (Mughal) order or grant.

FAUJDARI.—Under native rule, the area under a Faujdar or subordinate governor; now used generally of Magistrates' Criminal Courts.

FINANCIAL COMMISSIONER.—The chief controlling revenue authority in the Punjab, Burma and the Central Provinces.

GADDI, Gadi.—The cushion or throne of (Hindu) royalty.

GANJA.—The unfertilised flowers of the cultivated female hemp plant, CANNABIS SATIVA, used for smoking.

GAUR.—Wild cattle, commonly called 'bison', BOS GAURUS.

GAYAL.—A species of wild cattle, BOS FRONTALIS, domesticated on the North-East Frontier; syn. mithan.

GHAT, Ghaut.—(1) A landing-place on a river; (2) the bathing steps on the bank of a tank; (3) a pass up a mountain; (4) in European usage, a mountain range. In the last sense especially applied to the Eastern and Western Ghats.

GHATWAL.—A tenure-holder who originally held his land on the condition of guarding the neighbouring hill passes (ghats), Bengal.

GHI, Ghee.—Clarified butter.

GINGELLY.—See TIL.

GODOWN.—A store room or warehouse. An Anglo-Indian word derived from the Malay 'gadang.'

GOPURAM.—A gateway, especially applied to the great temple gateways in Southern India.

GOSAIN, Goswami.—A (Hindu) devotee; lit. one who restrains his passions.

GOSHA.—Name in Southern India for 'caste' women; lit. 'one who sits in a corner'; syn. parda.

GRAM.—A kind of pea, CICER ARIETINUM. In Southern India the pulse DOLICHOS BIFLORUS is known as horse gram.

GUARANTEED.—(1) A class of Native States in Central India; (2) A class of railways.

GUNS.—The red seed with a black 'eye' of ABRUS PRECATORIUS, a common wild creeper, used as the official weight for minute quantities of opium 12th TOLA.

GUR, Goor.—Crude sugar; syn. jaggery, southern India; tanyet, Burma.

GURAL.—A Himalayan goat antelope, CEMAGORAL.

GURU.—(1) A Hindu religious precep tor (2) a schoolmaster, Bengal.

HAJ.—Pilgrimage to Mecca.

HAJJI.—A mahomedan who has performed the haj. He is entitled to dye his beard red.

HAKIM.—A native doctor practising the Mahomedan system of medicine.

HALALKHOR.—A sweeper or scavenger; lit one to whom everything is lawful food.

HALI.—Current. Applied to coin of Native States, especially Hyderabad.

HAMAL.—(1) A porter or cooly, (2) a house servant.

HEJIRA. (HIJRAH)—The era dating from the flight of Mahomed to Mecca, June 20th, 622 A.D.

HILSA.—A kind of fish, CLUPEA ILISHA.

HTI.—An iron pinnacle placed on a pagode in Burma.

HUKKA, HOOKAH.—The Indian tobacco pipe.

IDGAH.—An enclosed place outside a town where Mahomedan services are held on festivals known as the Id., etc.

INAM.—Lit. 'reward'. Hence land held revenue free or at a reduced rate, often subjec, to service. See DEVASTHAU, SARAMJAM, WATAN.

INUNDATION CANAL.—A channel taken off from a river at a comparatively high level, which conveys water only when the river is in flood.

JACK FRUIT.—Fruit of ARTOCARPUS INTEGRIFOLIA, ver. PHANAS.

JAGGERY, jagri.—Name in Southern India for crude sugar; syn. gur.

JAGIR.—An assignment of land, or of the revenue of land held by a Jagirdar.

JEMADAR.—A native officer in the army or police.

JHIL.—A natural lake or swamp, Northern India; syn. bil, Eastern Bengal and Assam.

JIHAD.—A religious war undertaken by Musalmans.

JIRGA.—A council of tribal elders, North West frontier.

JOWAR.—The large millet, a very common food-grain, ANDROPOGON SORGHUM, or SORGHUM VULGARE; syn. cholam and jola, in Southern India.

JUDICIAL COMMISSIONER.—An officer exercising the functions of a High Court in the Central Provinces, Oudh, and Sind.

KACHERI, kachahri.—An office or office building, especially that of a Government official.

KADAR, karbi.—The straw of jowari (*q. v.*)—a valuable fodder.

KAJU, kashew.—The nut of ANACARDIUM OCCIDENTALE largely grown in the Konkan

KAKAR.—The barking deer, CERVULUS MUNTJAC.

KALAR, kallar.—Barren land covered with salt or alkaline efflorescences, Northern India.

KAMARBAND, Cummerbund.—A waistcloth, or belt.

KANAT.—The wall of a large tent.

KANGAR.—A kind of portable warming-pan, carried by persons in Kashmir to keep themselves warm.

KANKAR.—Nodular limestone, used for metalling roads, as building stones or for preparation of lime.

KANS.—A coarse glass which spreads and prevents cultivation especially in Bundelkhand, SACCHARUM SPONTANEUM.

KANUNGO.—A revenue Inspector.

KARAIT.—A very venomous snake, BUNGARUS CANDIDUS OR CAERULEUS.

KARBHARI.—A manager.

KAREZ.—Underground tunnels near the skirts of hills, by which water is gradually led to the surface for irrigation, especially in Baluchistan.

KARKUN.—A clerk or writer, Bombay.

KARMA.—The doctrine that existence is conditioned by the sum of the good and evil actions in past existences.

KARNAM.—See PATWARI

KAZI.—Under native rule, a judge administering Mahomedan law. Under British rule, the kazi registers marriages between Mahomedans and performs other functions, but has no powers conferred by law.

KHADI (or KHADDER).—Cotton cloth handwoven from hand-spun yarn.

KHALASI.—A native fireman, sailor, artilleryman, or tent-pitcher.

KHALSA.—Lit. pure.' (1) Applied especially to themselves by the Sikhs, the word Khalsa being equivalent to the Sikh community; (2) land directly under Government as opposed to land alienated to grantees, etc., Northern India.

KHANDI, candy.—A weight especially used for cotton bales in Bombay-equivalent to 20 mds.

KHARAB—In Bombay of any portion ran assessed survey No. which being uncultivable is left unassessed.

KHARIF.—Any crops sown just before or during the main S. W. monsoon.

KHAS.—Special, in Government hands. Khas tahasildar, the manager of a Government estate.

KHASADAR.—Local levies of foot soldiers, Afghanistan.

KHAS-KHAS, Kus-Kus.—A grass with scented roots, used for making screens which are placed in doorways and kept wet to cool a house by evaporation, ANDROPOGON SQUARROSUS.

KHEDDA, kheda.—A stockade into which wild elephants are driven; also applied to the operations for catching.

KHICHADI, kejjeree.—A dish of cooked rice and other ingredients, and by Anglo-Indians specially used of rice with fish.

KHILAT.—A robe of honour.

KHUTBA.—The weekly prayer for Mahomedans in general and for the reigning sovereign in particular.

KILLA.—A fort.

KINCOB, kamkhwab.—Silk textiles brocaded with gold or silver.

KODALI.—The implement like a hoe or mattock in common use for digging; syn. mamuti, Southern India

KONKAN.—The narrow strip of low land between the Western ghats and the sea.

KOS.—A variable measure of distance, usually estimated at about two miles The distance between the kos-minars or milestones on the Mughal Imperial roads averages a little over 2 miles, 4 furlongs, 150 yards.

KOT.—Battlements

KOTHI.—A large house.

KOTWAL.—The head of the police in a town, under native rule. The term is still used in Hyderabad and other parts of India.

KOTWALI.—The chief police station in a head-quarters town.

KULKARNI.—See PATWARI.

KUMBHAR.—A potter.

KURAN—A big grass land growing grass fit for cutting.

KYARI—Land embanked to hold water for rice cultivation.

KYAUNG.—A Buddhist monastery, which always contains a school, Burma.

LAKH, lac.—A hundred thousand.

LAMBARDAR.—The representative of the co-sharers in a zamindari village, Northern India.

LANGUR.—A large monkey, SEMNOPITHECUS ENTELLUS.

LASCAR, correct lashkar.—(1) an army, (2) in English usage a native Sailor

LAT.—A monumental pillar.

LATERITE.—A vesicular material formed of disintegrated rock, used for buildings and making roads; also probably valuable for the production of aluminium. Laterite produces a deep brichord soil.

LINGAM—The phallic emblem, worshipped as the representative of Shiva.

LITCHI—A fruit tree grown in North India (LITCHI CHINENSIS).

LOKAMANYA.—(lit.) Esteemed of the world or the people; a national hero.

LONGYI.—A waistcloth, Burma.

LOTA.—A small brass water-pot.

LUNGI, loongi—(1) A turban; (2) a cloth worn by women

MADRASA.—A school especially one for the higher instruction of Mahomedans.

MAHAJAN—The guild by Hindu or Jain merchants in a city. The head of the Mahajanssi, the Nagarsheth (*q. v.*).

MAHAL.—(1) Formerly a considerable tract of country; (2) now a village or part of a village for which a separate agreement is taken for the payment of land revenue; (3) a department of revenue, *e.g.*, right to catch elephants, or to take stone; (4) in Bombay a small Taluka under a MAHALKARI.

MAHANT.—The head of a Hindu conventual establishment.

MAHARAJA.—A title borne by Hindus, ranking above Raja.

MAHATMA.—(lit.) A great soul; applied to men who have transcended the limitations of the flesh and the world.

MAHSEER, mahasir.—A large carp, BARPUS FOR (lit. 'the big-headed').

MAHUA.—A tree, BASSIA LATIFOLIA, producing flowers used (when dried) as food or for distilling liquor, and seeds which furnish oil.

MAIDAN.—An open space of level ground; the park at Calcutta.

MAJOR WORKS.—Irrigation works for which separate accounts are kept of capital, revenue, and interest.

MAKTAB.—An elementary Mahomedan school.

MALGUZAR (revenue payer).—(1) The term applied in the Central Provinces to a co-sharer in a village held in ordinary proprietary tenure. (2) a cultivator in the Chamba State.

MALI.—A gardener.

MAMLATDAR.—The officer in charge of a taluka, Bombay, whose duties are both executive and magisterial; syn. tahasildar.

MANDAP, or mandapam.—A porch or pillared hall, especially of a temple.

MANGOSTEEN.—The fruit of GARCINIA MANGOSTANA.

MARKHOR.—A wild goat in North Western India, CAPRA FALCONERI.

MASJID.—A mosque. Jama Masjid, the principal mosque in a town, where worshippers collect on Fridays.

MASNAD.—Seat of state or throne, Mahomedan; syn. gaddi.

MATH.—A Hindu conventual establishment.

MAULVI.—A person learned in Muhammadan law.

MAUND, ver. Man.—A weight varying in different localities. The Ry. maund is 80 lbs.

MAYA.—Sanskrit term for delusion.

MEHEL or MAHAL.—A palace.

MELA.—A religious festival or fair.

MIHRAB.—The niche in the centre of the western wall of a mosque.

MIMBAR.—Steps in a mosque, used as a pulpit.

MINAR.—A pillar or tower.

MINOR WORKS.—Irrigation works for which regular accounts are not kept, except, in some cases, of capital.

MISTRI.—(1) a foreman, (2) a cook.

MONSOON.—Lit. 'season,' and specifically (1) The S. W. Monsoon, which is a Northward extension of the S. E. trades, which in the Northern Summer cross the equator and circulate into and around the low pressure area over North India, caused by the excessive heating of the land area, and (2) The N. E. monsoon, which is the current of cold winds blowing down during the Northern winter from the cold land areas of Central Asia, giving rain in India only in S. E. Madras and Ceylon through moisture acquired in crossing the Bay of Bengal, and passing across the equator into the low pressure areas of the Australasian Southern summit.

MUFASSAL, mofussil.—The outlying parts of a District, Province or Presidency, as distinguished from the head-quarters (Sadr).

MUKADDAM, muccadum.—A representative or headman.

MUKHTAR (corruptly mukhtiar).—(1) A legal practitioner who has not got a sanad, and therefore cannot appear in court as of right; (2) any person holding a power of attorney on behalf of another person.

MUKHTIARKAR.—The officer in charge of a taluka, Sind, whose duties are both executive and magisterial; syn. tahasildar.

MUKTI, 'release.'—The perfect rest attained by the last death and the final reabsorption of the individual soul into the world—soul, syn. NIRVANA, MOKSHA.

MUNG, mug.—A pulse, PHASEOLUS RADIATUS: syn. mag, Gujarat.

MUNJ.—(1) A tall grass (SACCHARUM MUNJA) in North India, from which mats are woven, and the Brahman sacred thread worn; (2) the said thread.

MUNSHI.—A teacher of Hindustani or any Perso-Arabian language.

MUNSIF.—Judge of the lowest Court with civil jurisdiction.

MURUM, moorum.—Gravel, used for metalling roads.

NACHANI-NAGLI.—See RAGI.

NAGARKHANA, Nakkarkhana.—A place where drums are beaten.

NAGARSHETH.—The head of the trading guild of Hindu and Jain Merchants in a city.

NAIB.—Assistant or Deputy.

NAIK.—A leader, hence (1) a local chieftain, in Southern India; (2) a native officer of the lowest rank (corporal) in the Indian army.

NAT.—A demon or spirit, Burma.

NAWAB.—A title borne by Musalmans, corresponding roughly to that of Raja among Hindus.

NAZAR, nazarana.—A due paid on succession or on certain ceremonial occasions.

NET ASSETS.—(1) In Northern India, the rent or share of the gross produce of land taken by the landlord; (2) in Madras and Lower Burma, the difference between the assumed value of the crop and the estimate of its cost of production.

NEWAR.—Broad cockney woven across bedsteads instead of iron slats.

NGAPI.—Pressed fish or salted fish paste, largely made and consumed in Burma.

NILGAI.—An antelope, BOSELAPHUS TRAGOCAMELUS.

NIM, neem.—A tree, MELIA AZADIRACHTA, the berries of which are used in dyeing.

NIRVANA.—See MUKTI.

NIZAM.—A title borne by the ruler of Hyderabad State.

NIZAMAT.—A sub-division of a Native State, corresponding to a British District, chiefly in the Punjab and Bhopal.

NON-AGRICULTURAL ASSESSMENT.—Enhanced assessment imposed when land already assessed as agricultural is diverted to use as a building site or for industrial concerns.

NON-COGNISABLE.—An offence for which the culprit cannot be arrested by the police without a warrant.

NON-OCCUPANCY TENANTS.—A class of tenants with few statutory rights, except in Oudh, beyond the terms in their leases or agreements.

NON-REGULATION.—A term formerly applied to certain Provinces to show that the regulations of full code of legislation was not in force in them.

NULLAH, NALA.—A ravine, watercourse, or drain.

OCCUPANCY TENANTS.—A class of tenants with special rights in Central Provinces, in United Provinces.

PADAUK.—A well known Burmese tree (PTEROCARPUS sp.) from the behaviour of which the arrival of the monsoon is prognosticated.

PADDY.—Unhusked rice.

PAGA.—A troop of horses among the Marathas.

PAGI.—A tracker thieves of strayed or stolen animals.

PAIGAH.—A tenure in Hyderabad State.

PAIK.—(1) A foot soldier; (2) in Assam formerly applied to every free male above sixteen years.

PAIREE.—The name of the second best variety of Bombay mango, distinguishable from the APHUS (*q. v.*) by its pointed tip, and by the colour being less yellow and more green and red.

PALAS.—See DHAK.

PALKI.—A palanquin or litter.

PAN.—The betel vine, PIPE BETLE.

PARAB.—A public place for the distribution of water, maintained by charity.

PARABADI.—A platform with a smaller platform like a dovecot on a centre pole or pillar built and endowed or maintained by charity, where grain is put every day for animals and birds.

PANCHAMA.—Low caste, Southern India.

PANCHAYAT.—(1) A committee for management of the affairs of a caste, village, or town; (2) arbitrators. Theoretically the panchayat has five (panch) members.

PANDIT.—A Hindu title, strictly speaking applied to a person versed in the Hindu scriptures, but commonly used by Brahmans. In Assam applied to a grade of Inspectors of primary schools.

PANSUPARI.—Distribution of PAN and SUPARI (*q. v.*) as a form of ceremonial hospitality.

PARDA, purdah.—(1) A veil or curtain; (2) the practice of keeping women secluded; syn. gosha.

PARDESI.—Foreign. Used in Bombay especially of Hindu servants, syces, &c., from North India.

PARGANA.—Fiscal area or petty sub-division of a tahsil, Northern India.

PASHM.—The fine wool of the Tibetan goat.

PASO.—A waistcloth.

PAT, put.—A stretch of firm, hard clay.

PATEL.—A village headman, Central and Western India; syn. reddi, Southern India, gaonbura, Assam; padhan, Northern and Eastern India: Mukhi, Guzarat.

PATIDAR.—A co-sharer in a village, Gujarat

PATTAWALLA.—See CHAPRASI.

PATWARI.—A village accountant; syn. karnam, Madras; kulkarni, Bombay Deccan; talati, Gujarat; shanbhog, Mysore, Kanara and Coorg; Mandal, Assam; Tapedar, Sind.

PEON.—See CHAPRASI.

PESHKASH.—A tribute or offering to a superior.

PHULAV, (Pilow).—A dish of rice and other ingredients, and by Anglo-Indians specifically used of chicken with rice and spices.

PHULKARI.—An embroidered sheet; lit flower-work.

PICE, paisa.—A copper or bronze coin worth one farthing; also used as a generic term for money.

PICOTTAH.—A lever for raising water in a bucket for irrigation, Southern India; syn. dhenkul or dhenkuli, or dhikli, Northern India.

PIPAL.—A sacred tree, FICUS RELIGIOSA.

PIR.—A Mahomedan religious teacher or salut.

PLEADER.—A class of legal practitioner.

PONGYI.—A Buddhist monk or priest, Burma.

POSTIN, poshteen.—A coat or rug of sheepskin tanned with the wool on, Afghanistan.

PRANT.—An administrative sub-division in Maratha States, corresponding to a British District (Baroda) or Division (Gwalior); also in Kathlawar.

PRESIDENCY.—A former Division of British India.

PROTECTED.—Forests over which a considerable degree of supervision is exercised, but less than in the case of 'reserved' forests.

PROVINCE.—One of the large Divisions of British India.

PUJA.—Worship, Hindu.

PUJARI.—The priest attached to a temple.

PUNDIT.—See Pandit.

PURANA.—Lit. 'old' Sanskrit (1) applied to certain Hindu religious books, (2) to a geological 'group'; (3) also to 'punch-marked' coins.

PUROHIT—A domestic chaplain or spiritual guide, Hindu.

PWE.—An entertainment, Burma.

RABI.—Any crop sown after the main South-West monsoon.

RAGI (ELEUSINE COROCANA).—A small millet used as a food-grain in Western and Southern India; syn. marua, Nagli Nachni.

RAJA.—A title borne by Hindus and occasionally by Musalmans, corresponding roughly to that of Nawab which is peculiar to Musalmans.

RAMOSHI.—A caste whose work is watch and ward in the village lands and hence used of any chaukidar (*q. v.*).

RANA.—A title borne by some Rajput chiefs equivalent to that of Raja.

RANI.—The wife or widow of a Raja.

RAO.—A title borne by Hindus, either equivalent to, or ranking below, that of Raja.

REGAR.—Name for a black soil in Central and Southern India, which is very retentive of moisture, and suitable for growing cotton.

REGULATION.—A term formerly applied to certain provinces to show that the Regulations or full code of legislation applied to them.

REH.—Saline or alkaline efflorescences on the surface of the soil, Northern India.

RESERVED.—Forests intended to be maintained permanently.

RICKSHAW.—A one or two seat vehicle on two wheels drawn by coolies, used in the hills.

ROHU.—A kind of fish, LABEO ROHITA.

RYOTWARI.—The system of tenure in which land revenue is imposed on the actual occupants of holdings.

SADR, sudder.—Chief (adjective). Hence the headquarters of a District; formerly applied to the Appellate Courts.

SAFFLOWER.—A thistle which yields a yellow dye from its petals and oil from its seeds (CARTHAMUS TINCTORIUS), ver. Kardai, Kushanti.

SAL.—A useful timber tree in Northern India, SHOREA ROBUSTA.

SAMBAR.—A deer, CERVUS UNICOLOR; syn. jarau.

SAN.—Bombay hemp, CROTALARIA JUNCEA.

SANAD.—(1), A charter or grant, giving its name to a class of States in Central India held under a sanad, (2) any kind of deed of grants.

SANNYASI.—A Hindu mendicant.

SARI.—A long piece of cloth worn by women as a shawl.

SARANJAM.—Land held revenue free or on a reduced quit-rent in consideration of political services rendered by the holder's ancestors.

SARKAR.—(1) The Government; (2) a tract of territory under Muhammadan rule, corresponding roughly to a Division under British administration.

SARSUBAH.—An officer in charge of a Division in the Baroda State corresponding to Commissioner of British territories.

SATI.—Suicide by a widow, especially on the funeral pyre of her husband.

SATYAGRAHA.—(lit.) One possessed by the truth; one who follows the truth wherever it may lead. (Commonly used to denote the passive resistance movement.)

SAWBWA.—A title borne by chiefs in the Shan States, Burma.

SEMAL or cotton tree.—A large forest tree with crimson flowers and pods containing a quantity of floss, BOMBAY MALABARICUM.

SEROW, sarau.—A goat antelope, NEMORHAEDUS BUBALINUS.

SETTLEMENT.—(1) The preparation of a cadastral record, and the fixing of the Government revenue from land; (2) the local inquiry made before Forest Reserves are created; (3) the financial arrangement between the Government of India and Local Governments.

SHANBHOG.—See PATWARI.

SHASTRAS.—The religious law-books of the Hindus.

SHEGADI, seggaree.—A pan on 3 feet with live charcoal in it.

SHER, ser, seer—A weight, or measure varying much in size in different parts of the country. The Railway ser is about 2 lbs.

SHETH, shethia.—A Hindu or Jain merchant.

SHIGURAM.—See TONGA.

SHISHAM or sissu.—A valuable timber tree, DALBERGIA SISSOO.

SILLADAR.—A native trooper who furnishes his own horse and equipment.

SOLA.—A water-plant with a valuable pith, AESCHYNOMENE ASPERA.

SOWAR.—A mounted soldier or constable.

STUPA or tope.—A Buddhist tumulus, usually of brick or stone, and more or less hemispherical, containing relics.

SUBAH.—(1) A province under Mahomedan rule; (2) the officer in charge of a large tract in Baroda, corresponding to the Collector of a British District; (3) a group of Districts or Division, Hyderabad.

SUBAHDAR.—(1) The governor of a province under Mahomedan rule; (2) a native infantry officer in the Indian Army; (3) an official in Hyderabad corresponding to the Commissioner in British territory.

SUB-DIVISION.—A portion of a District in charge of a junior officer of the Indian Civil Service or a Deputy Collector.

SUPARI.—The fruit of the betel palm, ARECA CATECHU.

SUPERINTENDENT.—(1) The chief police officer in a District; (2) the official in charge of a hill station; (3) the official, usually of the Indian Medical Service, in charge of a Central Jail.

SURTI.—Native of Surat, specially used of persons of the Dhed or Mahar caste who work as house servants of Europeans, and whose house speech is Gujarati.

SYCE, sais.—A groom.

TABUT.—See TAZIAH.

TAHSIL.—A revenue sub-division of a District; syn. taluka, Bombay; taluka, Madras and Mysore; township, Burma.

TAHSILDAR.—The officer in charge of a tahsil; syn. Mamlatdar, Bombay; township officer or myo-ok, Burma; Mukhtiarkar, Sind; Vahivatdar, Baroda. His duties are both executive and magisterial.

TAKAVI.—Loans made to agriculturists for seed, bullocks, or agricultural improvements; syn. tagai, Bombay.

TALATI.—See PATWARI.

TALAV, or talao.—A lake or tank.

TALUK, taluka.—The estate of a talukdar in Oudh. A revenue sub-division of a District, in Bombay, Madras and Mysore; syn. tahsil.

TALUKDAR.—A landholder with peculiar tenures in different parts of India. (1) An official in the Hyderabad State, corresponding to the Magistrate and Collector (First Talukdar) or Deputy Magistrates and Collectors (Second and Third Talukdars); (2) a landholder with a peculiar form of tenure in Gujarat.

TAMTAM, tumtum.—A North Indian name for a light trap or cart.

TANK.—In Southern, Western, and Central India, a lake formed by damming up a valley; in Northern India, an excavation holding water.

TAPEDAR.—See PATWARI.

TARAI.—A moist swampy tract; the term especially applied to the tract along the foot of the Himalayas.

TARI, toddy—The sap of the date, palmyra, or cocoanut palm, used as a drink, either fresh or after fermentation. In Northern India the juice of the date is called Sendhi.

TASAR, tussore.—Wild silkworms, ANTHERAEA PAPHIA; also applied to the cloth made from their silk.

TAZIA.—Lath and paper models of the tombs of Hasan and Husain, carried in procession at the Muharram festival; syn. tabut.

TEAK.—A valuable timber tree in Southern and Western India and Burma, TECTONA GRANDIS.

TELEGRAPHIC TRANSFERS.—See Council bills.

THAGI, thuggee.—Robbery after strangulation of the victim.

THAKUR.—(1) The modern equivalent of the caste name Kshattriya in some parts of Northern India; (2) a title of respect applied to Brahmans; (3) a petty chief; (4) a hill tribe in the Western Ghats.

THAMIN.—The brow-antlered deer Burma, CERVUS ELDI.

THANA.—A police station, and hence the circle attached to it.

TIKA.—(1) Ceremonial anointing on the forehead; (2) vaccination.

TIKAM.—The English pickaxe (of which the word is a corruption).

TIL.—An oilseed, SESAMUM INDICUM; also known as gingelly in Madras.

TINDAL, tandel.—A foreman, subordinate officer of a ship.

TIPAI, Teapoy.—A table with 3 legs, and hence used of any small European style table.

TOLA.—A weight equivalent to 180 grains (troy).

TONGA.—A one or two horsed vehicle with a covered top. syn. SHIGHRAM.

TSINE.—Wild cattle found in Burma and to the southward, BOS SONDAICUS; syn. hsaing and banteng.

UNIT.—A term in famine administration denoting one person relieved for one day.

URIAL.—A wild sheep in North-Western India, OVIS VIGNEI.

URID, UDID.—A pulse, 'black grain,' (PHASEOLUS MUNGO).

UMBAR.—A wild pig—(FICUS GLOMERATA).

USAR.—Soil made barren by saline efflorescence, Northern India.

VAHIVATDAR.—Officer in charge of a revenue sub-division, with both executive and magisterial functions, Baroda; syn. tahsildar.

VAID or baidya, Bengal.—A native doctor practising the Hindu system of medicine.

VAKIL.—(1) A class of legal practitioner; (2) an agent generally.

VIHARA.—A Buddhist monastery.

VILLAGE.—Usually applied to a certain area demarcated by survey, corresponding roughly to the English parish.

VILLAGE UNION.—An area in which local affairs are administered by a small committee.

WADA or WADI.—(1) an enclosure with houses built round facing a centre yard; (2) private enclosed land near a village.

WAKF.—A Muhammadan religious or charitable endowment.

WAO.—A step well.

WATAN.—A word of many senses. In Bombay Presidency used mostly of the land or cash allowance enjoyed by the person who performs some service useful for Govt. or to the village community.

WAZIR.—The chief minister at a Mahomedan court.

WET RATE.—The rate of revenue for land assured of irrigation.

YOGI.—A Hindu ascetic who follows the yoga system, a cardinal part of which is that it confers complete control over the bodily functions enabling the practiser, for instance to breathe in through one nostril and out at the other.

YUNANI.—Lit. Greek; the system of medicine practised by Mahomedans.

ZAMINDAR.—A landholder.

ZAMINDARI.—(1) An estate; (2) the rights of a landholder, zamindar; (3) the system of tenure in which land revenue is imposed on an individual or community occupying the position of a landlord.

ZANANA.—The women's quarters in a house, hence private education of women.

ZIARAT.—A Mahomedan shrine, North-Western Frontier.

ZILA.—A District.

The New Capital.

The transfer of the capital of India from Calcutta to **Delhi** was announced at the Delhi Durbar on December 12, 1911. The reasons for it were stated in despatches between the Government of India and the Secretary of State published at the time. It had long been recognised as necessary, in the interests of the whole of India, to de-provincialise the Government of India, but this ideal was unattainable as long as the Government of India was located in one Province, and in the capital of that Province—the seat of the Bengal Government—for several months in every year. It was also desirable to free the Bengal Government from the close proximity of the Government of India which had been to the constant disadvantage of that Province. To achieve these two objects the removal of the capital from Calcutta was essential: its disadvantages had been recognised as long ago as 1868, when Sir Henry Maine advocated the change. Various places had been discussed as possible capitals, but Delhi was by common consent the best of them all. Its central position and situation as a railway junction, added to its historical associations, told in its favour; and, as Lord Crewe said in his despatch on the subject, "to the races of India, for whom the legends and records of the past are charged with so intense a meaning, this resumption by the Paramount Power of the seat of venerable Empire should at once enforce the continuity and promise the permanency of British sovereign rule over the length and breadth of the country."

The foundation stones of the new capital were laid by the King Emperor on December 15, 1911, when His Majesty said:—"It is my desire that the planning and designing of the public buildings to be erected will be considered with the greatest deliberation and care so that the new creation may be in every way worthy of this ancient and beautiful city." Subsequently a **town-planning committee** was appointed—consisting of Captain G. S. C. Swinton, Chairman, and Mr. J. A. Brodie and Sir Edwin Lutyens, members—to advise on the choice of a site for, and the lay-out of, the capital. Mr. V. Lanchester was subsequently consulted by Government on some aspects of the question. The terms of their original engagement (subsequently renewed) were stated by the Under Secretary of State to be:—"The members of the committee will receive their travelling and living expenses, and the following fees for a five months' engagement:—Captain Swinton, 500 guineas; Mr. Brodie, 1,750 guineas; Sir Edwin Lutyens, 1,500 guineas. The Secretary of State has also undertaken to refund to the Corporation of Liverpool the amount of Mr. Brodie's salary for the period of the absence."

Delhi and its environs.—In their first report, dated from Simla, 13th June 1912, the Committee explain that, in dealing with the choice of a site, they felt that the following considerations were paramount and must receive the closest and most continual attention:—(*a*) Health and sanitation, (*b*) water-supply and irrigation supply, (*c*) the provision of ample room for expansion, (*d*) an extent of land suitable for the location of buildings of various characters and sizes and for the provision of spacious parks and recreation grounds—to be assumed at 10 square miles for the New City and 15 square miles for the Cantonment—(*e*) Cost of land and the cost of executing necessary works on different sites, (*f*) facility for external and internal communication, (*g*) Civil and Military requirements.

On the east of the Jumna they found no suitable site. To the north of Delhi, on the west of the Jumna, where the Durbar camps were pitched they found some general advantages. The area is, for example, upwind and upstream from the present city of Delhi. The ruins and remains of the Delhis of the past do not cumber the ground; While the external communications might need improvement, the tract is fairly well served by existing railways. Roads and canals and the internal communication could be made convenient without excessive expenditure, and a good deal of money has already been spent on the area. But its disadvantages were found to be overwhelming. The site is too small and much of the land is liable to flooding. Similarly, the western slope of the hills to the south of Delhi, the Naraina plain, was found unsuitable, mainly because it cannot be considered to be Delhi, is destitute of historical associations, and is shut out from all view of Delhi.

Southern site chosen.—The Committee finally selected a site on the eastern slopes of the hills to the south of Delhi, on the fringe of the tract occupied by the Delhis of the past. They describe it as follows:—"Standing a little to the Delhi side of the village of Malcha, just below the hills almost in the centre of the site, and looking towards the Jumna, Shahjahan's Delhi on the left fills the space between the ridge and the river. Following down from the present city on the foreshore of the riverain, Firoz Shah's Delhi, the site of Indra Prastha, Humayun's fort, Humayun's tomb and Nizamuddin's tomb take the eye in a continuous progress to the rocky eminence on which Ghiyasuddin Tughlak erected his fortress city. On the right the Lal Kot, the Kutb, the Kila Rai Pithora, Siri and Jahanpanah complete the circle of the monuments of ancient Delhis. The mid space in the fore ground is filled by Safdar Jang's Mausoleum and the tombs of the Lodi dynasty, while to the left, towards Delhi, Jey Singh's gnomons and equatorial dials raise their fantastic shapes." The land chosen is free from liability to flood, has a natural drainage, and is not manworn. It is not cumbered with monuments and tombs needing reverent treatment, and the site is near the present centre of the town of Delhi.

Healthiness of Site.—In February, 1913, a Committee consisting of Surgn. General Sir C. P. Lukis, Mr. H. T. Keeling, C.S.I., A.M I.C.E., and Major J. C. Robertson, I.M.S., was appointed to consider the comparative healthiness of the northern and southern sites. Their report, dated 4th March, 1913, states that "the Committee, after giving full consideration to the various points discussed in the above note, is bound to advise the Government of India that no doubt can exist as to the superior

healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site."

Report on Northern Site.—In the same month the Town-Planning Committee presented their second report, which dealt with the northern site. This had been elicited by the fact that in December, 1912, Sir Bradford Leslie, an engineer with a distinguished Indian career, had read a paper before the Indian section of the Royal Society of Arts in London, in which he set forth plans for building the new capital on the northern site and producing a fine water effect by a treatment of the river Jumna. This paper aroused considerable attention in England, and its publication synchronised with some letters and articles in the press in India expressing a preference for the northern site. The latter voiced a natural attraction to the north site which the Committee themselves experienced on their first visit to Delhi, and enunciated some predelictions which the Committee had at one time felt and later abandoned. The Town Planning Committee, therefore, undertook to review once more, and in greater detail, the arguments for and against the northern site. They came to the conclusion that:—"The soil is poor on the northern site as compared with the southern. The southern site is already healthy and has healthy surroundings. The northern site even after expenditure on sanitary requirements will never be satisfactory. If the northern site is to be made healthy, this involves going outside the site itself and making the neighbourhood healthy also. The building land to the south is generally good. On the north to be used at all it has in places to be raised at considerable cost. There is no really suitable healthy site for a cantonment in proximity to a city on the northern site. The exigencies of fitting in the requirements to the limited area of the northern site endanger the success of a lay-out as a whole and tend to make for cramping and bad arrangement. The result of placing a city on the northern site appears to the Committee to be the creation of a bad example in place of a good one."

Final Town-Planning Report.—The final report of the Town-Planning Committee, with a plan of the lay-out, was dated 20th March, 1913. The central point of interest in the lay-out, which gives the motif of the whole, is Government House, and the large blocks of Secretariats. This Government centre has been given a position at Raisina hill near the centre of the new city. Advantage is taken of the height of this hill and it is linked with the high ground behind so as to appear a spur of the ridge itself. Behind the hill a raised platform or forum will be built. This will be flanked by the large blocks of Secretariat buildings and terminated at its western end by the mass of Government House with its wide flight of steps, portico and dome. The forum will be approached by inclined ways with easy gradients on both its north and south sides. The axis of the main avenue centres on the north-west gate of Indrapat nearly due east of Government House.

Looking from the eastern end of the forum where the broad avenue enters the Governmental centre and where the great stairways are set, the view is towards the east. "Right and left the roadways go and weld into one the empire of to-day with the empires of the past and unite Government with the business and lives of its people."

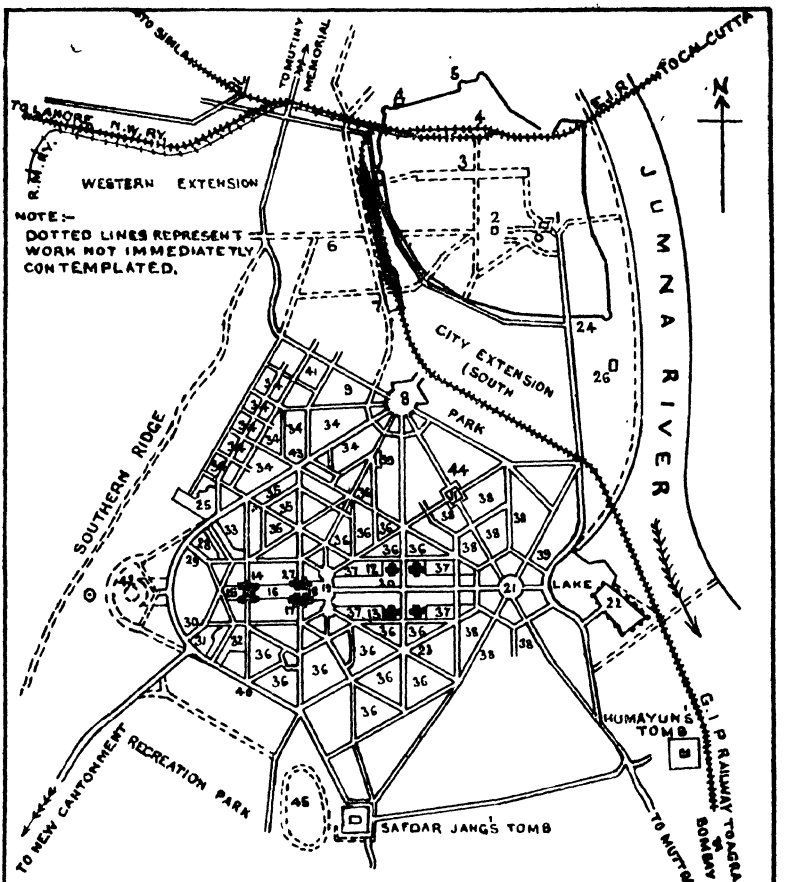
Behind Government House to the west will be its gardens and parks flanked by the general buildings belonging to the Viceregal estate. Beyond these again, on the ridge itself, will be a spacious amphitheatre to be made out of the quarry from which much of the stone for roads and buildings may be cut. Above this and behind it will lie the reservoir and its tower which will be treated so as to break the sky line of the ridge. To the east of the forum, and below it, will be a spacious forecourt defined by trees and linked on to the great main avenue or parkway which leads to Indrapat. Across this main axis, and at right angles to it, will run the avenue to the railway station. This will terminate in the railway station, the post office and business quarters at its northern end, and in the Cathedral at its southern extremity.

To the south-east will lie the park area in which stand the ancient monuments of Safdar Jang's Makhbara and the Lodi tombs. This area can be developed gradually as the city expands and has need of public institutions of various kinds. The axis running north-east from the Secretariat buildings to the railway station and towards the Jama Masjid will form the principal business approach to the present city. At the railway station a *place* will be laid out around which will be grouped the administrative and municipal offices, the banks, the shops and the hotels. On this *place* the post office is placed in symmetrical relation to the railway station.

The processional route will lead down from the railway station, due south to the point where it is intersected by the main east to west axis. Here round a *place* will be gathered the buildings of the Ethnological Museum, the Library and the Imperial Record Office. To the south-west of the railway station will lie the houses of the local administration and the residences of the European clerks.

Due south of the forum the residence of the Commander-in-Chief will be placed. Round about the Viceregal estate and the forum lies the ground destined for the residences of the Secretaries and other officials of the Government of India. To the south-east of Government House lies the club. To the south of the club a low ridge divides the tract into two portions. That to the west is well adapted for a golf-course, while the eastern side is designed for a race-course, the ridge itself offering unusual facilities for locating stands and seeing the races.

Communications.—The avenues range from 76 feet to 150 feet in width with the exception of the main avenue east of the Secretariat buildings where a parkway width of 1,175 feet has been allowed. The principal avenues in addition to the main avenues are those running at right angles to the main east to west axis.



1. KING EDWARD VII MEMORIAL
2. JAMA MASJID
3. CHANDNI CHOWK
4. EXISTING DELHI MAIN STATION
5. KASHMIR GATE
6. INTERMEDIATE CITY EXTENSION
7. PROPOSED NEW JOINT RAILWAY STATION.
8. STATE ENTRANCE TO RY: STATION
9. LADY HARDINGE'S COLLEGE & HOSPITAL FOR WOMEN.
10. JANTAR MANTAR
11. UNIVERSITY
12. RECORD OFFICE
13. ETHNOLOGICAL MUSEUM
14. GOVERNMENT HOUSE
15. MOGHAL GARDEN
16. VICEROY'S COURT
17. SECRETARIAT SOUTH BLOCK
18. GOVERNMENT COURT
19. GREAT PLACE
20. CENTRAL VISTA
21. PROPOSED WAR MONUMENTS.
22. PURANA KILA (INDRPAT)
23. CATHEDRAL SITE (ANGLICAN)
24. DELHI GATE
25. TALKATORA PARK
26. FEROZ SHAH KOTLA
27. SECRETARIAT NORTH BLOCK.
28. PRIVATE SECRETARY TO VICEROY.
29. MILITARY SECRETARY TO VICEROY.
30. SURGEON TO VICEROY
31. COMPTROLLER TO VICEROY
32. BODY GUARD & TROOPS
33. VICEREGAL STAFF QUARTERS
34. INDIAN CLERKS QUARTERS
35. EUROPEAN CLERKS QUARTERS
36. OFFICERS BUNGALOWS
37. HON. MEMBERS BUNGALOWS
38. RULING PRINCES & CHIEFS RESIDENCES.
39. BEGUM OF BHOPAL'S GIRLS' SCHOOL
40. COMMANDER-IN-CHIEF'S RESIDENCES.
41. PEONS' QUARTERS
42. PROPOSED AMPHITHEATRE
43. CATHEDRAL SITE (ROMAN CATH.)
44. ST. STEPHENS COLLEGE
45. PROPOSED RACE COURSE

Others form part of a system running from the amphitheatre to the railway station and Commander-in-Chief's residence, and from both the latter to the proposed War Memorial lying on the axis between Indrapat and Government House which is the focal point of the roads and avenues on the packway.

A lake which can be obtained by river treatment is shown on the plan. The lay-out has been made independent of the water effect, but the Committee think that its ultimate creation will enhance enormously the beauties and general amenities of the new capital: and it should and would become an integral portion of the design now submitted

The report contains lengthy recommendations concerning water-supply, drainage, sewage system, parks and communications. It is imperative, it says:—"that a complete scheme of railway arrangements designed to serve the whole of the capital, both old and new, should be an essential feature of the lay-out of the Imperial City, and this important matter should not be left to be settled when it is too late to deal with it." The main lines of the lay-out as projected by the Committee have been accepted by Government and a great deal of work has been on them. The expenses of the new central station and the difficulty experienced in meeting the various railway interests concerned will necessitate the postponement of this part of the scheme, and it has been decided that the needs of New Delhi will be met by a diversion of the existing Agra-Delhi Chord Railway to a line drawn eastward of Humayun's Tomb and Purana Killa and the construction of a new through station near the site of the proposed Central station. Another important modification consists in the reservation of the area lying south of the Delhi and Ajmere Gates of the city for the purpose of the extension of Old Delhi.

Nor is it now proposed to give effect to the extensive scheme of river training designed by the Town Planning Committee; and it is probable that little more will be done in this direction than to create a lake immediately at the end of the central vista and alongside the walls of Indrapat.

Temporary Capital.—For the use of the Government of India during the period of the building of the new capital—a period that will have to be extended owing to the conditions created by the war—an area has been selected along the Alipur Road, between the present civil station of Delhi and the Ridge. The early idea that many of the officials should live under canvas had to be given up, and there are now temporary offices and residences. The architecture and method of construction are similar to those adopted in the exhibition buildings at Allahabad in 1910; but the buildings will outlast the transitional period for which they are intended. They will subsequently be an asset of some value.

Chief Commissioner Appointed.—On October 1, 1912, by proclamation, there was constituted an administrative **enclave of Delhi** under a Chief Commissioner, Mr. W. M. Hailey, I.C.S. Mr. Hailey has since become Finance Member of H. E. the Viceroy's Executive Council and the Chief Commissioner is now Mr. C. A. Barrow, C.S.I., C.I.E., I.C.S. The Delhi district of the Punjab, from which this enclave was entirely taken, consisted of three tahsils or subdivisions and the enclave was formed by the central tahsil, that of Delhi, and by such part of the southern tahsil, Ballabgarh, as was comprised within the limits of the police post of Mahrauli. Delhi Province as thus defined had originally an area of 528 square miles to which was added later an area of 45 square miles to the east of the Jumna river and taken from the United Provinces to serve as a grazing ground for the cattle for the city. The total area is, therefore, 573 square miles. On the basis of the Census of 1911, the population of the area originally included in the Province is 3,98,269 and of the new area 14,552, or a total of 4,12,821. The population of the Municipal town of Delhi is 2,29,144.

The Architects' Designs.—At the Royal Academy in 1914 there were exhibited drawings by Sir Edwin Lutyens and Mr. Baker, which though provisional and rather in the nature of what are called Warrant Designs, show how the architectural problems of the new capital are to be solved. Government House and the Secretariat have been planned by them as one block, as it were a Capital, facing towards Indrapat. The **Secretariat** is being built on the rock of Raisina hill, the top of which has been levelled for the purpose: behind the Secretariat is to be a raised causeway forming the approach to Government House: and Government House itself is being built on a high basement constructed on an outcrop of rock. The main processional route to Government House has been made along sloping way (at a gradient of one in 22½) which leads from a semi-circular piazza, the "Great Place" to the level of the Secretariat buildings.

At the summit of this sloping way is the "**Government Court**", a space of about 1,100 feet in length, and 400 feet in breadth flanked to the north and south by the two blocks of Secretariat buildings. These buildings have been designed by Mr. Baker and the aggregate cost will be some Rs. 1,24,00,000. According to the design the eastern end of each block is marked by deep loggias looking out over the Central Vista. In the centre of each block is a dome. In the case of the north block this marks an Entrance Hall: in the south block it surmounts a Conference Hall with a suite of cloak and reception rooms. Each block contains four floors: on the main ground floor are the general offices of the Departments; on the first floor are the offices of members of Council Secretaries, and other officers; whilst the remaining floors are occupied by clerk rooms and records. An essential feature of the design, and one which sets the character of the whole building, is the provision of loggias and recessed gate ways or exedrae giving views through to the fountain courts situate in the interior of the blocks, and these take the place of the continuous verandahs that are so familiar a feature in Indian buildings. The Architect relies for control of temperature on these loggias and recesses, on which external walls, together with the thick window shutters adopted so widely in Southern Europe, and the wide *chajjs* characteristics of Oriental buildings.

Between the north and south Secretariat blocks, is the way into the "**Viceroy's Court**" —the raised causeway already referred to— leading up to Government House. The Court is about 600 feet in breadth and 1,300 feet in length; it will be treated with grass and water ways and low trees: and should form a dignified approach to the final group of buildings. At a point midway in the causeway, at which will be erected a column presented by the Maharajah of Jaipur, roads lead off to the north and south, forming alternative lines of approach to Government House.

One thus reaches the portico of **Government House.** This portico raised some twenty feet above the level of the Viceroy's Court and thirty-five feet above the surrounding country. The house itself centres round the great Durbar Hall, a domed structure which dominates the scheme of the buildings surrounding it. Grouped round the Durbar Hall are the State Rooms and great stairways from the entrance Courts on the north and south sides. Projecting from this central block are four wings, that on the south-west containing the Viceroy s private apartments. In the south-west wing, accommodation is provided for the A.D.C.'s to the Viceroys Guests are accommodate l in the north-west wing, whilst the north-east wing contains the officers of the Viceroy's Private and Military Secretaries and other members of his establishment. On the western side of the house will be a raised garden, walled and terraced after the manner of the Moghuls, and behind that again, on the level of the surrounding country, a park which will contain the staff houses and quarters. The park will extend to the rocky slopes of the Ridge which close in the vista on the west. The house will, with its attached quarters, garden and park, all of which have been designed by Sir Edwin Lutyens, cost approximately Rs. 95,00,000.

Style of Architecture.—There had been a prolonged "battle of the styles" over Delhi and if these designs gave satisfaction to neither of the extreme and opposed schools of thought, they clearly showed an endeavour to apply, with due regard for Indian sentiment, the spirit and essence of the great traditions of architecture to the solution of structural problems conditioned upon an Indian climate and Indian surroundings and requirements. To use the language of the architects themselves, it has been their aim "to express, within the limit of the medium and of the powers of its users, the ideal and the fact of British rule in India, of which the New Delhi must ever be the monument."

The inspiration of these designs is manifestly Western, as is that of British rule, but they combine with it distinctive Indian features without doing violence to the principles of structural fitness and artistic unity. Much will depend upon the resourcefulness and ability of the Indian artificers themselves whom the Government of India proposes to bring together in Delhi to give expression, by their decorative work, to the best traditions of skilled Indian craftmanship.

Cost of the Scheme.—It was at first tentatively estimated that the cost of the new capital would be four million sterling and that sum was given in the original despatch of the Government of India on the subject. Various factors have since then increased the cost, the chief of these being the immense rise in prices since the war, and the Legislative Assembly were informed by Government on 23rd March, 1921, that the revised estimates now amounted to 13 crores of rupees. This amount includes allowances for building new Legislative Chambers and Hostels for Members of the Indian Legislature, which were not allowed for in the earlier estimates.

The Project Estimate contains certain items such as land, residences, water supply, electric light and power, and irrigation on which recoveries in the form of rate or taxes will, in addition to meeting current expenditure, partially at any rate cover the interest on the capital outlay whilst there are other items on which some return on account of the sale of leases, general taxes on and indirect receipts may be expected.

Progress of the work.—The construction of New Delhi has made satisfactory progress, having regard to the curtailment of the Budget allotment, in consequence of the war and the return of officers and other establishments to their civil work has made possible a considerable speeding up of constructional operations provided money can be provided to pay for them.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects. The basements of Government House and the large blocks of Secretariats by which it will be flanked, and a great deal of their superstructures, have been completed; substantial progress has been made with the Viceroy's Court, the Government Court between the two blocks of Secretariats, and the Great Place and with the tree planting and waterways of the Central Vista. An indication of the progress at the Governmental centre on Raisina Hill is the arrival there in 1920 of the statues of their Majesties in Coronation robes, which are to be placed in front of Government House. That of the King, by Mr. Mackenna, is the gift of the Maharaja Scindia of Gwalior, and of the Queen, by Sir George Frampton, is the gift of the Maharaja of Bikanir. The keen interest of the ruling princes in the transfer of the capital, which is very welcome to them, is further shown in the gift by the Maharaja of Jaipur of funds for a Column, designed by Sir Edwin Lutyens, which is to be located midway in the Viceroy's Court This Column is surmounted by the Star of India, and will be visible from many parts of the New City.

Col. Sir Sydney Crookshank, Secretary to the Government of India, P.W.D., informed the Legislative Assembly at Delhi on 16th March, 1921, that the "Government House work is nearly one-third finished, the Secretariat blocks somewhere about two-fifths and the Residential buildings about three-fifths finished. We have still some 52 Officers' bungalows, 73 European quarters, and 16 Orthodox quarters to construct before we shall have finished the present programme of construction of residential buildings, which in itself is only about four-fifths of the

tot l required . . . . We have constructed "practically all the main roads and now have to carry on the construction of service roads . . . Where we are behindhand is in engineering services, and that is where we ought to make a special effort to push on, in order that we shall have our electric-light and power, sewerage and drainage and water supplies on a thoroughly satisfactory basis."

Opinion of the Legislature.—Considerable discussion regarding the New Capital works took place in the Assembly. A certain number of members who wished the work to be stopped, either to save the outlay or in order that a new capital might be established in some other locality with a more equable climate throughout the year, received no countenance. Strong feeling against the annual temporary migration of the Government of India to Simla led to the passage of a Resolution urging the speediest possible completion of New Delhi so that it might accommodate Government throughout the year. It runs. "This Assembly recommends to the Governor-General in Council that in the interests of economy and of general convenience alike the execution of the programme of New Delhi works may be expedited and the necessary funds provided or raised so that the Secretariat and Legislative buildings and connected works including residences may be completed as early as practicable." Sir Sydney Crookshank informed the House that at the rate of expenditure of one crore per annum, which was approximately the present rate, eight years would be required to finish the work, whereas by spending two crores a year the work would be finished in four years, but that as they had already entered on this year they could not spend fully two crores within it, so that the four-year period really meant between 4 and 5 years. Non-official Members urged Government to devise means for annually providing more funds and the Finance Member undertook to consider whether and how he could do so.

A non-official Member in the Legislative Assembly on 28th September, 1921, at Simla, moved a recommendation to Government "to appoint a Committee to inquire into the possibility of establishing a permanent Capital of India in a place possessing salubrious and temporate climate throughout the year." This proposal was ridiculed by several of his non-official colleagues and was eventually rejected without a division.

The exact expenditure on the New Capital upto 31st March, 1922, will be approximately Rs. 6,20,00,000, or approximately half the estimated total.

Two Cathedral Schemes.—In October 1913 a letter was published in *The Times* from the Bishop of Calcutta on the provision of a Cathedral at Delhi. He appealed for £50,000 in addition to any grant given by the Government, and quoted in his letter the following statement of approval by the King-Emperor: "I heartily approve of the project to build a Cathedral in the new city of Delhi. I trust that the appeal for the necessary funds may meet with a generous response, so that in due time the capital of India may possess a Cathedral which in design and character will testify to the life and energy of the Anglican Church and be worthy of its architectural surroundings both of days gone by and of those to come." His Majesty subscribed £100 and the Queen £50 to the fund. The Indian Church Aid Association have received several contributions towards the building fund for the proposed Cathedral Church, in response to the appeal of the Bishop of Calcutta. Cheques may be sent to the Secretary, Indian Church Aid Association, Church House, Westminster, S. W. and crossed Lloyds Bank, St. James's Street, S. W.

A Roman Catholic Cathedral is also projected and Father Paul Hughes, O.M.C., has been touring India collecting money for the Cathedral Fund.

All-India War Memorial.—H. R. H. the Duke of Connaught on 10th February, 1921, laid the foundation-stone of an All-India War Memorial at the southern end of the Central Vista. The place chosen is a fine position in the centre of the circular Princes' Park around which the mansions of the Ruling Princess will be built and overlooking the lake on the opposite side of which lies Indrapat.

The Memorial will take the form of a triumphal arch spanning Kingsway, the avenue running down the centre of the Vista. It will generally be similar to the Arc de Triomphe in Paris, but will be simpler in a way which will probably increase its grandeur and dignity. The monument will reach a height of 160 feet and the inner height of the arch will be 87 feet 6 inches and its breadth 70 feet. Over the arch on both fronts will appear in capital letters the single word INDIA and this will be flanked on each side by the initials MCM (*i.e.*, 1900) whilst immediately below them on the left-hand will be the initials XIV (*i.e.*, 14) and on the opposite side the figures XIX (*i.e.*, 19). Lateral arches through the monument will be flanked by fountains.

The architectural features of the Memorial will contain nothing specially pertaining to any religious denomination nor any carving of figures or other ornaments that might offend any creed. The lower part will be constructed of red Bhartpur stone and the upper part of white Dholpur stone. The arch will be surmounted by a great cornice and above this will be an attic, or series of enormous steps, ascending centrally. Above these will be a circular stone bowl 11½ feet in diameter. This is intended to be filled with burning oil on great anniversaries and other occasions so that there will be a shining fire by night and a column of smoke by day.

The end of each pier of the arch resembles in appearance the Cenotaph erected in Whitehall, London, in memory of the British soldiers who fell in the Great War. The memorial is solely Indian in purpose and will bear the names of Indian regiments only.

Legislative Council Chamber.—H. R. H. the Duke of Connaught on 12th February, 1921, laid the foundation-stone of a large group of Parliament buildings in New Delhi on a convenient site shortly north-eastward of the Secretariats. The buildings will form an imposing structure circular in shape and centrally surmounted by a large dome.

The outer edge of the building will be formed of a verandah, having along its outer side a complete circle of round stone columns, while opening on to the verandah will be a circle of Secretariat Offices concerned with the Chambers to be housed within. This girdle of verandah and offices will surround a large circular site in which will be four distinct buildings linked with one another and with the offices. Three of them will be practically semi-circular in shape, having their bases upon the inner side of the girdle. They will externally be similar in size and design and will internally be arranged to accommodate respectively the Chamber of Princes, the Council of State, and the Legislative Assembly. The spaces between them will be occupied by gardens, each garden occupying the same amount of ground as one of the buildings.

In the centre of the circle will stand the largest of the inner buildings. It will be circular in shape and will be linked by a cloister with each of the other buildings. It will contain a domed circular central hall 90 feet in diameter. This will be used as a library for the members of the three Chambers and will be of a size and arrangement sufficient and suitable to accommodate a joint session of both Council of State and Legislative Assembly and probably also of the Chamber of Princes with them, if it should ever be desirable to have a joint session of all three.

Residencies for ruling Princes and Chiefs.—Sites have already been allotted on which thirty three of the Ruling Princes and Chiefs propose to erect residences for occupation when visiting the New Capital. The States which up to the present hour signified their desire to build are Hyderabad, Baroda, Mysore, Bhopal, Gwalior, Kashmir, Kalat, Travancore, Bahawalpur, Bharatpur, Bikaner, Bundi, Kotah, Cutch, Jodhpur, Patiala, Tonk, Alwar, Datia, Dhar, Dholpur, Jaisalmer, Kishangarh, Orchha, Partabgarh, Sirohi, Faridkhot, Jind, Kapurthala, Nabha, Sailana, Malerkolta and Loharu.

Enthological Meseum.—The first wing has been built of a museum in which Sir Aurel Stein will house some of his Central Asian Antiquities. Work on certain frescoes was started under Sir Aurel's direction in the 1920-21 coldweather and has made considerable progress.

The Agra-Delhi Railway Diversion.—As has been already stated, this railway which at present runs across the site of the new city is to be diverted to a new alignment running East of Humayun's Tomb and Indrapat. Amongst other matters which are now receiving attention are the designs for the residences of the Commander-in-Chief and the Hon'ble members, the afforestation of the Ridge to the west of the new city, the designs for the Imperial Record Office, and the naming of the roads.

Sanitary Improvements.—While the work on the new city has been going forward various improvements in the existing Delhi have been carried out and the sanitary conditions in particular have been much improved. The fly nuisance which was extremely bad in Delhi has been much reduced, and other schemes have been formulated as the result of a sanitary survey which embraced the whole of the city. The most tangible results of these efforts is seen in the consistent fall in the death-rate, and the acknowledged reduction in the amount of sickness in Delhi.

Higher College for Chiefs.—It was proposed during 1914 that a higher college for Chiefs should be established at Delhi and in this connexion a conference of Chiefs and Political Officers was held at Delhi, in March, at which the Viceroy presided. It was subsequently announced that subscriptions offered towards the college amounted to about ten and a half lakhs, various recurring sums were promised, and the Government of India also promised to recommend the Secretary of State, a grant of Rs. 50,000 a year. Thus the whole capital would come to 12½ lakhs. The proposal is still under consideration.

Red Cross Work.

The Joint War Committee of the Order of St. John of Jerusalem and the British Red Cross Society, India Branch, came into being on 2nd August 1916 and has been responsible for the provision of almost the whole of the supplies of comforts for the sick and wounded ever since. Up to the end of 1917 its own resources had to be supplemented by grants from the Home Committee, but the generous response to the "**Our Day**" appeal made by all classes in India secured its financial position and for the past year it has not only been self-supporting but can regard the future without anxiety.

Their Excellencies the Viceroy, Lady Chelmsford and the Commander-in-Chief are the President, Lady President and Vice-President respectively of the Committee, the affairs of which are managed by a **General Committee** composed as follows :—

The Hon'ble Mr. W. M. Hailey, C.S.I., C.I.E., I.C.S. (Chairman).
Colonel Sir Lawless Hepper, Kt., R.E. (Vice-Chairman, Bombay).
The Hon'ble Sir W. E. Crum, O.B.E. (Vice-Chairman, Calcutta).
Col. C. L. Magniac, C.M.G., C.B.E., R.E. (Vice-Chairman, Madras).
Lieut.-General Sir Charles Burtchell, K.C.B., C.M.G., K.H.S.
The Hon'ble Sir William Vincent, K.C.S.I.
The Hon'ble Sir John Wood, K.C.I.E., C.S.I.
The Hon'ble Mr. H. Sharp, C.S.I., C.I.E.
Lieut.-Colonel H. Auston Smith, C.I.E., I.M.S.
H. R. Phelps, Esq.
B. N. Mitra, Esq., C.I.E., C.B.E.
Miss H. Rait, R.R.C., C.B.E.
The Hon'ble Major-General W. R. Edwards, C.B., C.M.G., K.H.P.
The Rev. James Black, M.A., O.B.E.
Lt.-Col. H. Ross, O.B.E., I.M.S.
W. J. Litster, Esq., O.B.E.
Major A. L. Davis, C.B.E.
Miss Darbyshire, R.R.C.
Lady Bingley, O.B.E.
E. J. Buck, Esq., C.B.E.

The Hon'ble Mr. Purshotamdas Thakurdas, C.I.E., M.B.E.

The Hon'ble Rao Bahadur Chaudhri Lal Chand, O.B.E.

Lieut.-Col. H. Ross, O.B.E., I.M.S. (Hon. Secretary.)

In the beginning of 1918 a scheme of reorganization of Red Cross work throughout India and Burma was adopted as the result of which each Province became practically autonomous as regards its own Red Cross work. The wants of Military hospitals situated within the boundaries of a Province became its own special care and were met by a Provincial Committee which administered Provincial Funds and organized Work Parties and other supplies. Provinces also were most generous in sending supplies of clothing and other comforts to the Bombay Depot. The General Committee thus relieved of the supervision of local work was enabled to concentrate its energies on co-ordinating Red Cross work throughout India, to take the measures necessary to avoid over-lapping, to exercise general control over the operations of the Bombay Depot, and to arrange for supplies required by Commissions overseas. The result of the re-organization proved most satisfactory.

Finances.—The operations of the Joint War Committee were brought to a close in June, 1920. According to the final report, the total receipts of the committee amounted to Rs. 1,77,85,716. Of this Rs. 17,44,683 was received from the Home Committee; of the collections on "**Our Day**" 85¾ lakhs were credited to the Central Committee donations to the Committee, interest, Government grants for Red Cross Hospitals and stores, etc. Mesopotamian "**Our Day**" collections and sale proceeds of assets of Mesopotamian commission account for the remainder. The Committee under its career with a capital investment of the face value of Rs. 56,33,000 (present market value Rs. 48,72,545) and Rs. 8,01,500-8-6 in floating and fixed deposit accounts.

New Organisation.—In 1919 when the Joint War Committee received an invitation to join the International League of Red Cross Societies, it was not deterred by the fact that it could not, in fact, claim to be a regularly constituted Red Cross Society. But it began to take the necessary steps to regularise its position in this regard. It recognized, moreover, that it had been constituted as a committee for war purposes; but the great war was over, and it desired that, following the example of the Red Cross Society of England, it should secure formal authority to expend for civil purposes such portions of its capital funds as remained after meeting the primary purposes for which they were subscribed A Bill was introduced by Sir Claude Hill in the Imperial Legislative Council in March 1920, designed to give effect to these intentions, and duly passed into law as Act XV of 1920. The first members of the Indian Red Cross Society as constituted by that Act, were nominated on 7th June 1920, and the Managing Body duly elected; the resources and the obligations of the Joint War Committee passed on that date to the Indian Cross Society.

Indian Official Reports.

(MOSTLY ANNUAL.)

General.—

Statistical Abstract relating to British India (Parliamentary Paper).

Statistics of British India :—

Vol. I.—Commercial.
Vol. II.—Financial.
Vol. III.—Public Health.
Vol. IV.—Administrative and Judicial.
Vol. V.—Educational.

Census Reports (Decennial), India, Provincial and Native States.

Administration Reports: Madras, Bombay, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, North-West Frontier Province, Delhi, Coorg, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan Agency.

Legislation.—

Acts of the Imperial and Provincial Legislative Councils.

Justice and Police.—

Report on the Administration of Civil Justice for each Province.

Report on the Administration of Criminal Justice for each Province.

Report on Jails for each Province.

Reports on Police, for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

Finance.—

Finance and Revenue Accounts of the Government of India.

East India Financial Statement (Parliamentary Paper).

Return of Net Income and Expenditure for eleven years (Parliamentary Paper).

Accounts and Estimates: Explanatory Memorandum (Parliamentary Paper).

Home Accounts (Parliamentary Paper).

Loans raised in England (Half-yearly Parliamentary Paper).

Loans raised in India (Half-yearly Parliamentary Paper).

Mint Reports for Calcutta and Bombay.

Paper Currency Department Reports, India and Bombay.

Statistics compiled from the Finance and Revenue Accounts.

Land Revenue, &c.—

Land Revenue Administration : Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c., for North-West Frontier Province.

Madras Survey, Settlement and Land Records Department Report.

Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.

Report on Settlement Operations, Punjab.

Reports on Survey and Settlement Operations, Bengal, Bihar and Orissa, and Assam.

Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.

Report of the Talukdari Settlement Officer, Bombay.

Provincial Reports on the Administration of Estates under the Court of Wards.

Report on the Punjab Canal Colonies.

Separate Revenue (Salt, Excise, &c.)—

Salt Department Reports: Northern India, Madras, Bombay, Sind, Bengal, Burma, Bihar and Orissa.

Excise Report for each Province.

Report on the operations of the Opium Department.

Stamp Department Report for each Province.

Registration Department Report for each Province.

Income Tax Report for each Province.

Agriculture and Veterinary.—

Report on the Progress of Agriculture in India

Report of the Agricultural Research Institute and College, Pusa.

Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.

Memoirs of the Department of Agriculture.

Proceedings of the Board of Agriculture.

Agricultural Journal of India (quarterly).

Reports of the Department of Agriculture for each Province.

Reports on Agricultural Stations, Experimental Farms, and Botanic Gardens for each Province.

Season and Crop Report for each Province.

Agricultural Statistics of India.

Area and Yield of certain Principal Crops.

Report on Production of Tea in India.

Statement relating to Area, Production, Stocks, Exports and Imports of Rubber in India.

Statement relating to Area, Production, Import and Export of Coffee in India.

Report on Tea Culture in Assam.

Reports of the Civil Veterinary Departments for each Province.

Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.

Report of the Camel Specialist.

Report of the Imperial Bacteriologist (Veterinary).

Co-operative Societies.—

Statements showing Progress of the Co-operative Movement in India.

Reports on Co-operative Societies for each Province.

Reports of Conferences of Registrars of Co-operative Societies, India and Provincial.

Forests.—

Annual Return of Statistics relating to Forest Administration in British India.

Report on Forest Administration for each Province.

Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.

Quinquennial Forest Review.

Indian Forest Memoirs.

Indian Forest Records.

Forest Bulletins.

Mineral Production and Inspection of Mines.—

Review of Mineral Production (in Records of Geological Survey).

Report on Production and Consumption of Coal in India.

Report of the Chief Inspector of Mines.

Trade and Manufactures.—

Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Bihar and Orissa, Burma).

Review of the Trade of India (Parliamentary Paper).

Tables of the Trade of India (Parliamentary Paper).

Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Bihar and Orissa, Bombay, Sind, Madras, and Burma.

Accounts relating to the Sea-borne Trade and Navigation of British India (monthly and for Calendar Year).

Accounts relating to the Trade by Land of British India with Foreign Countries (monthly).

Annual Statement of Coasting Trade of British India.

Report on the Trade and Navigation of Aden.

Accounts of Trade carried by Rail and River in India.

Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.

External Land Trade Reports for Bengal, Bihar and Orissa, Assam, Burma, United Provinces, Punjab, North-West Frontier Province, Sind, and British Baluchistan.

Indian Trade Journal (weekly).

Statistics relating to Joint-Stock Companies in British India and Mysore.

Report on the working of the Indian Companies Act for each Province.

Report on the working of the Indian Factories Act for each Province.

Report of the Chief Inspector of Explosives.

Public Works.—

Administration Report on Railways.

Reports on Public Works (Buildings and Roads), for Madras, Bombay, Punjab, North-West Frontier Province, and Burma.

Review of Irrigation.

Report on Irrigation Revenue for each Province (except Madras).

Administrative Reports on Irrigation, Madras and Bombay.

Report on Architectural Work in India.

Posts and Telegraphs.—

Reports on the Posts & Telegraphs of India.

Report of Indo-European Telegraph Department.

Scientific Departments.—

Report on the Operations of the Survey of India.

Records of the Survey of India.

Records and Memoirs of the Geological Survey of India.

Report of the Indian Meteorological Department.

Indian Weather Review, Annual Summary.

Rainfall data of India.

Memoirs of the Indian Meteorological Department.

Report of the Meteorologist, Calcutta.

Report of the Director-General of Observatories.

Memoirs and Bulletins of the Kodaikanal Observatory.

Report of the Board of Scientific Advice.

Report of the Archæological Survey of India and Provincial Reports.

Report and Records of the Botanical Survey.

Education,—

Education Reports for India and each Province.

Quinquennial Review of Education (Parliamentary Paper).

Local Self-Government.—

Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.

Report on District and Local Boards or Local Funds for each Province.

Reports of Port Trusts of Calcutta, Bombay Madras, Rangoon, Karachi, and Aden.

Medical, Sanitary, and Vital Statistics.—

Report of the Sanitary Commissioner with the Government of India.

Report on Sanitary Measures in India (Parliamentary Paper).

Report of the Sanitary Commissioner for each Province.

Vaccination Report for each Province.

Report on Civil Hospitals and Dispensaries for each Province.

Report on Lunatic Asylums for each Province.

Report of the Chemical Examiner and Bacteriologist for each Province.

Scientific Memoirs by Officers of the Medical and Sanitary Departments.

Reports of the All-India Sanitary Conferences.

Reports of the Imperial Malaria Conferences.

Indian Journal of Medical Research (Quarterly).

Emigration and Immigration.—

Calcutta Port Emigration Report.

Bengal Inland Emigration Report.

Assam Immigration Report.

Prices and Wages.—

Prices and Wages in India.

Variations in Indian Price Levels.

Reports of Provincial Wage Censuses.

Customs Tariff.

The customs revenue is mainly derived from the general import duty, certain special import duties such as those on arms, liquors, sugar, petroleum and tobacco, and an export duty on rice. General import duties, which were abolished in 1882, were reimposed in 1894, since which date the general rate of duty on commodities imported into British India by sea has been 5 per cent. *ad valorem*. Cotton was exempted in 1894 when the general duties were received; in December 1894 a 5 per cent. duty *ad valorem* was imposed on imported cotton goods and yarns, while an excise duty of 5 per cent. was imposed on all yarns of counts above 20 spun at power mills in British India; in February 1896 cotton yarns and threads imported or manufactured in India were freed from duty, while a uniform 3½ per cent. *ad valorem* duty was imposed on all woven cotton goods imported or manufactured in India at power mills. The products of hand looms are exempted. The gross revenue from imports, salt excluded, in 1915-16, was Rs. 7,35,31,000. The estimated gross revenue from this source for 1916-17 is Rs. 8,89,20,000.

The **Chief alterations in the tariff**, which came into force on March 1, 1916, are as follows:—

Goods which before have been dutiable at the rate of 5 per cent. now pay 7½ per cent. *ad valorem* Machinery, which (with the exception of cartridge-making machinery and machines worked by animal or manual labour) was formerly free, is subject to a duty of 2½ per cent. *ad valorem*, but machinery for cotton spinning and weaving mills remains duty free, as do cotton yarn and thread. Cotton manufactures remain dutiable as before at the rate of 7½ per cent. *ad valorem*. Railway material and ships are to pay 2½ per cent., and coal a specific duty of 8 annas per ton. Iron and steel in bars, plates, sheets, and other manufactured forms, formerly dutiable at 1 per cent. are now to pay 2½ per cent. The rates for silver and petroleum remain as before, but silver plate and silver thread are to pay 10 per cent. The sugar duty is raised from 5 to 10 per cent., and considerable increases have also been made in the rates leviable on alcoholic liquors and tobacco. In addition export duties have been placed on tea and jute.

Schedule II—(Import Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco.			
	FISH.		Rs. a.	
1	FISH, SALTED, wet or dry	Indian maund of 82⅔ lbs. avoirdupois weight.	....	Such rate or rates of duty not exceeding twelve annas as the Governor-General in Council may, by notification in the *Gazette of India*, from time to time prescribe.
2	FISHMAWS, including singally and sozille, and sharkfins.	....	*Ad valorem*	11 per cent.
3	FISH, excluding salted fish (see No. 1)	....	,,	11 ,, ,,
	FRUITS AND VEGETABLES.			
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—			
	Almonds without shell	cwt.	75 0	11 per cent.
	,, in the shell	,,	24 0	11 ,, ,,
	,, kagazi .. { Persian	,,	125 0	11 ,, ,,
	,, kagazi .. { European, including half-hard round almonds.	,,	40 0	11 ,, ,,
	Cashew or cajoo kernels	,,	28 0	11 ,, ,,
	Cocoanuts, Straits and Dutch East Indies ..	thousand.	120 0	11 ,, ,,
	,, Maldives	,,	40 0	11 ,, ,,
	,, other	,,	65 0	11 ,, ,,
	,, kernel (khopra)..	cwt.	24 0	11 ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	FRUITS AND VEGETABLES—*contd.*		Rs. a.	
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—*contd.*			
	Currants	cwt.	45 0	11 per cent.
	Dates, dry, in bags	,,	11 0	11 ,, ,,
	,, w't, in bags, baskets and bundles ..	,,	9 0	11 ,, ,,
	,, ,, in pots, boxes, tins and crates ..	,,	12 0	11 ,, ,,
	Figs, Persian, dried..	,,	16 0	11 ,, ,,
	Garlic	,,	10 0	11 ,, ,,
	Pistachio nuts	,,	100 0	11 ,, ,,
	Raisins, Munukka, Persian Gulf	,,	15 0	11 ,, ,,
	,, other sorts	....	*Ad valorem*	11 ,, ,,
	All other sorts of fruits and vegetables, fresh, dried, salted or preserved.	....	,,	11 ,, ,,
	GRAIN, PULSE AND FLOUR.			
5	GRAIN AND PULSE, all sorts, including broken grain and pulse, but excluding flour (see No. 6).	....	,,	2½ ,, ,,
6	FLOUR	....	,,	11 ,, ,,
7	FODDER, Bran and Pollards	....	,,	2½ ,, ,,
	LIQUORS.			Rs. a. p.
8	ALE, Beer, and Porter	Imperial gallon or 6 quart bottles	....	0 6 6
9	LIQUEURS, Cordials, Mixtures and other preparations containing spirit—			
	(*a*) Entered in such a manner as to indicate that the strength is not to be tested.	,,	....	25 0 0
	(*b*) If tested	Imperial gallon or 6 quart bottles of the strength of London proof.	....	18 12 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
10	PERFUMED SPIRITS	Imperial gallon or 6 quart bottles.	....	30 0 0
11	SPIRIT, which has been rendered effectually and permanently unfit for human consumption.	....	*Ad valorem*	7½ per cent.

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	LIQUORS—*contd.*		Rs. a.	Rs. a. p.
12	All other sorts of SPIRIT	Imperial gallon or 6 quart bottles of the strength of London proof.	....	18 12 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
13	WINES—			
	Champagne and all other sparkling wines not containing more than 42 per cent. of proof spirit.	Imperial gallon or 6 quart bottles.	....	9 9 0
	All other sorts of wines not containing more than 42 per cent. of proof spirit.	,,	....	4 8 0
	Provided that all sparkling and still wines containing more than 42 per cent of proof spirit shall be liable to duty at the rate applicable to "All other sorts of Spirit."			
	PROVISIONS AND OILMAN'S STORES.			
14	VINEGAR, in casks	....	*Ad valorem*	2½ per cent.
15	PROVISIONS, OILMAN'S STORES, AND GROCERIES, all sorts, excluding vinegar in casks (see No. 14)—			
	Butter	lb.	2 4	11 ,, ,,
	Cassava, Tapioca or Sago whole	cwt.	12 0	11 ,, ,,
	,, ,, ,, flour	....	11 0	11 ,, ,,
	China preserves in syrup	Box of 6 large or 12 small jars.	10 0	11 ,, ,,
	,, ,, dry, candied	lb.	0 8	11 ,, ,,
	Chinese canned fruit	case of 4 dozen.	17 0	11 ,, ,,
	Cocum	cwt.	10 0	11 ,, ,,
	Ghi	,,	50 0	11 ,, ,,
	Saffron pure	,,	50 0	11 ,, ,,
	Vermicelli, flour, Chinese	,,	35 0	11 ,, ,,
	,, Peas ,, ...	,,	37 0	11 ,, ,,
	,, Rice ,, ...	,,	19 0	11 ,, ,,
	Vinegar not in casks	....	*Ad valorem*	11 ,, ,,
	All other sorts of provisions, oilman's stores and groceries.	....	,,	11 ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Name of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	SPICES.			
16	SPICES, all sorts—		Rs. a.	
	Betelnuts, raw, whole, split, or sliced, also red whole from Goa.	cwt.	12 0	11 per cent.
	,, ,, ,, ,, ,, ,, Straits	,,	12 0	11 ,, ,,
	,, boiled, split or sliced	,,	20 0	11 ,, ,,
	,, whole, from Ceylon	,,	15 0	11 ,, ,,
	,, raw, split (sun-dried), from Ceylon	,,	30 0	11 ,, ,,
	,, all other sorts	....	*Ad valorem*	11 ,, ,,
	Chillies, dry	cwt.	25 0	11 ,, ,,
	Cloves	,,	65 0	11 ,, ,,
	,, exhausted	,,	20 0	11 ,, ,,
	,, stems and heads	,,	9 0	11 ,, ,,
	,, in seeds, nariavang	,,	20 0	11 ,, ,,
	Ginger, dry	,,	30 0	11 ,, ,,
	Mace	lb.	0 12	11 ,,
	Nutmegs	,,	0 7	11 ,,
	,, in shell	,,	0 4	11 ,, ,,
	Pepper, black	cwt.	26 0	11 ,, ,,
	,, white	,,	60 0	11 ,, ,,
	All other sorts of spices	....	*Ad valorem*	11 ,, ,,
	SUGAR.			
17	CONFECTIONERY	....	,, ,,	20 ,, ,,
18	SUGAR, all sorts, including Molasses and Saccharine produce of all sorts, but excluding confectionery (see No. 17)—			
	Sugar, crystallised and soft, from Java, 23, Dutch standard and above.	cwt.	26 4	15 ,, ,,
	,, ,, from Java 16 to 22 Dutch standard.	,,	24 4	15 ,, ,,
	,, ,, from Java 15 Dutch standard and under.	,,	23 12	15 ,, ,,
	,, ,, and soft, from Japan or Formosa.	,,	28 4	15 ,, ,,
	,, ,, and soft refined in China ..	,,	28 4	15 ,, ,,
	,, ,, ,, ,, from Egypt ..	,,	27 4	15 ,, ,,
	,, ,, ,, ,, from Mauritius ..	,,	24 12	15 ,, ,,
	,, ,, beet	,,	26 4	15 ,, ,,
	Molasses from Java	,,	4 0	15 ,, ,,
	,, ,, other countries	,,	4 0	15 ,, ,,
	Sugar, all other sorts, including saccharine produce of all kinds.	....	*Ad valorem*	15 ,, ,,
	Sugar-candy	cwts.	25 0	15 ,, ,,
	TEA.			
19	TEA—			
	Tea, black	lb.	0 12	11 ,, ,,
	,, green	,,	0 14	11 ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	OTHER FOOD AND DRINK.		Rs. a.	Rs. a. p.
20	COFFEE..	cwt.	36 0	11 per cent.
21	HOPS	....	....	Free.
22	SALT	Indian maund of 82⅔ lbs. avoirdupois weight.	....	The rate at which excise duty is for the time being leviable on salt manufactured in the place where the import takes place.
23	SALT imported into British India and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in any process of manufacture; also salt imported into the port of Calcutta and issued with the sanction of the Government of Bengal to manufacturers of glazed stoneware; also salt imported into any port in the provinces of Bengal and Bihar and Orissa and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in curing fish in those provinces.	....	....	Free.
24	ALL OTHER SORTS OF FOOD AND DRINK not otherwise specified.	....	*Ad valorem*	11 per cent.
	TOBACCO.			
25	TOBACCO, unmanufactured	lb.	....	1 0 0
26	CIGARS AND CIGARETTES	....	*Ad valorem*	75 per cent.
27	All other sorts of TOBACCO, manufactured.. ..	lb.	....	2 4 0
	II.—Raw Materials and produce and articles mainly unmanufactured.			
	COAL, ETC.			
28	COAL, COKE AND PATENT FUEL	Ton.	....	0 8 0
	GUMS, RESINS AND LAC.			
29	GUMS, RESINS AND LAC, all sorts—			
	Gambier, block	cwt.	28 0	11 per cent.
	„ Cube	„	28 0	11 „ „
	„ Other Sorts	....	*Ad valorem*	11 „ „
	Gum Ammoniac	cwt.	30 0	11 „ „
	„ Arabic	„	22 0	11 „ „
	„ Benjamin, ras	„	28 0	11 „ „

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff valuation.	Duty.
	II.—Raw Materials and produce and articles mainly unmanufactured *—contd.*		Rs. a.	Rs. a. p.
29	GUMS, RESINS AND LAC, all sorts—*contd.*			
	Gum Benjamin, cowrie..	cwt.	65 0	11 per cent.
	„ Bysabol (coarse myrrh)	„	45 0	11 „ „
	„ Olibanum of frankincense	„	15 0	11 „ „
	„ Persian (false)	„	15 0	11 „ „
	Myrrh	„	45 0	11 „ „
	Rosin	„	24 0	11 „ „
	All other sorts of gums, gum-resins, and articles made of gum or gum-resin.	....	*Ad valorem*	11 „ „
	HIDES AND SKINS, RAW.			
30	HIDES AND SKINS, raw or salted..	....	....	Free.
	METALLIC ORES, AND SCRAP IRON OR STEEL FOR RE-MANUFACTURE.			
31	IRON OR STEEL, old..	cwt.	3 0	2½ per cent.
32	METALLIC ORES, all sorts	„	....	Free.
	OILS.			
33	PETROLEUM, including also naptha and the liquids commonly known by the names of rock-oil, Rangoon-oil, Burma oil, kerosine, paraffin oil, mineral oil, petroline, gasoline, benzol, benzoline, benzine, and any inflammable liquid which is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum, but excluding the following classes or petroleum.	Imperial gallon.	....	0 1 6
34	Petroleum which has its flashing point at or above two hundred degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively for the batching of jute or other fibre, or for lubricating purposes.	....	*Ad valorem*	7½ per cent.
34*a*	Petroleum which has its flashing point at or above one hundred and fifty degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively as fuel or for some sanitary or hygienic purpose.	....	„	
	(i) Imported in bulk —	ton.	65 0	7½ per cent.
	(ii) Otherwise imported	....	*Ad valorem*	7½ „ „
35	All other sorts of animal, essential, mineral, and vegetable non-essential OILS—			
	Cocoanut oil	cwt.	37 8	11 „ „
	Linseed Oil, raw and boiled	gallon.	4 8	11 „ „
	All other sorts of oil	....	*Ad valorem*	11 „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*		Rs. a.	
	SEEDS.			
36	OIL-SEEDS, imported into British India by sea from the territories of any Native Prince or Chief in India.	....	....	Free.
37	SEEDS, all sorts, excluding oil-seeds specified in No. 35.	....	*Ad valorem*	11 per cent.
	TALLOW, STEARINE AND WAX.			
38	Vegetable Wax	cwt.	70 0	11 ,, ,,
38*a*	TALLOW AND STEARINE, including grease and animal fat, and WAX of all sorts, not otherwise specified.	....	,,	11 ,, ,,
	TEXTILE MATERIALS.			
39	COTTON, raw	....	....	Free.
40	WOOL, raw	....	....	,,
41	TEXTILE MATERIALS, the following:—			
	Silk waste and raw silk including cocoons—			
	Bokhara	lb.	8 8	11 per cent.
	Floss	....	*Ad valorem*	11 ,, ,,
	Raw silk—Yellow Shanghai, including re-reeled.	lb.	7 8	11 ,, ,,
	Yellow from Indo-China, and places in China other than Shanghai including re-reeled.	,,	10 0	11 ,, ,,
	Mathow	,,	6 0	11 ,, ,,
	Panjam	,,	4 8	11 ,, ,,
	Persian	,,	6 0	11 ,, ,,
	Siam	,,	8 0	11 ,, ,,
	White Shanghai, Thonkoon or Duppion.	,,	5 8	11 ,, ,,
	,, other kinds including re-reeled.	,,	8 8	11 ,, ,,
	,, other kinds of China, including re-reeled.	,,	10 8	11 ,, ,,
	Waste and Kachra	....	*Ad valorem*	11 ,, ,,
	All other sorts, including cocoons	....	,,	11 ,, ,,
	Raw Flax, Hemp, Jute and all other unmanufactured textile materials not otherwise specified.	....	,,	11 ,, ,,
	WOOD AND TIMBER.			
42	FIREWOOD	....	,,	2½ ,, ,,
43	WOOD AND TIMBER, all sorts, not otherwise specified, including all sorts of ornamental wood.	....	,,	11 ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*		Rs. a.	
	MISCELLANEOUS.			
44	CANES AND RATTANS	....	*Ad valorem*	11 per cent.
45	COWRIES AND SHELLS, including Tortoise-shell—			
	Cowries, bazar, common	cwt.	7 8	11 ,, ,,
	,, yellow, superior quality	,,	8 8	11 ,, ,,
	,, Maldive	,,	11 0	11 ,, ,,
	,, Sankhli	,,	135 0	11 ,, ,,
	Mother-of-pearl, nacre	,,	20 0	11 ,, ,,
	Nakhla	,,	135 0	11 ,, ,,
	Tortoise-shell	lb.	10 0	11 ,, ,,
	,, nakh	,,	3 0	11 ,, ,,
	All other sorts, including articles made of shell, not otherwise described.	....	*Ad valorem*	11 ,, ,,
46	IVORY, unmanufactured—			
	Elephant's grinders	cwt.	300 0	11 ,, ,,
	,, tusks (other than hollows, centres, and points), each exceeding 20 lb. in weight, and hollows, centres, and points each weighing 10 lb. and over.	,,	950 0	11 ,, ,,
	Elephants' tusks (other than hollows, centres and points), not less than 10 lb. and not exceeding 20 lb. each, and hollows, centres, and points each weighing less than 10 lb.	,,	750 0	11 ,, ,,
	Elephants' tusks, each less than 10 lb. (other than hollows, centres, and points).	,,	400 0	11 ,, ,,
	Sea-cow or moye teeth, each not less than 4 lb.	,,	225 0	11 ,, ,,
	Sea-cow or moye teeth, each not less than 3 lb. and under 4 lb.	,,	175 0	11 ,, ,,
	Sea-cow or moye teeth, each less than 3 lb. ..	,,	125 0	11 ,, ,,
	All other sorts unmanufactured not otherwise specified.	....	*Ad valorem*	11 ,, ,,
47	MANURES, all sorts, including animal bones and the following chemical manures:—Basic slag, nitrate of soda, muriate of potash, sulphate of potash, kainit salts, nitrate of lime, calcium cyanamide and mineral superphosphates. †	....	....	Free.
48	PRECIOUS STONES AND PEARLS, unset *	....	....	Free.
49	PRECIOUS STONES UNSET AND IMPORTED CUT ..	....	*Ad valorem*	11 per cent.
50	PULP OF WOOD, RAGS and other paper-making materials.	....	....	Free.
51	ALL OTHER RAW MATERIALS, and produce and articles mainly unmanufactured, not otherwise specified.	....	*Ad valorem*	11 per cent.

* Pearls unset and unset precious stones imported uncut have been exempted by executive order from payment of duty.

† Sulphate of ammonia and mineral phosphates have been exempted from payment of duty by executive order.

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured.			
	APPAREL.			
52	APPAREL, including drapery, boots and shoes, and military and other uniforms and accoutrements, but excluding uniforms and accoutrements exempted from duty (No. 51) and silver thread (No. 90).	....	*Ad valorem*	11 per cent.
53	UNIFORMS AND ACCOUTREMENTS appertaining thereto, imported by a public servant for his personal use.	....	....	Free.
	ARMS, AMMUNITION AND MILITARY STORES.			
54	Subject to the exemptions specified in No. 55, ARMS, AMMUNITION AND MILITARY STORES, that is to say,—			Rs. a.
	(1) Firearms other than pistols, including gas and air guns and rifles.	Each.	....	15 0 }
	(2) Barrels for the same, whether single or double.	,,	....	15 0 }
	(3) Pistols, including automatic pistols and revolvers.	,,	....	15 0 }
	(4) Barrels for the same, whether single or double.	,,	....	15 0 } or 20 per cent. *ad valorem* whichever is higher.
	(5) Main springs and magazine springs for firearms, including gas, guns and rifles.	,,	....	5 0 }
	(6) Gun stocks and breech blocks	,,	....	3 0 }
	(7) Revolver cylinders, for each cartridge they will carry.	,,	....	2 0 }
	(8) Actions (including skeleton and waster), breech bolts and their heads, cocking pieces, and locks (for muzzle-loading arms).	,,	....	1 0 }
	(9) Machines for making loading or closing cartridges for rifled arms.	....	*Ad valorem*	20 per cent.
	(10) Machines for capping cartridges for rifled arms.	....	,,	20 ,, ,,
55	GUNPOWDER for cannons, rifles, guns, pistols and sporting purposes.	....	,,	20 ,, ,,
56	Subject to the exemptions specified in No. 55 all ARTICLES, other than those specified in entry No. 52, which are ARMS OR PARTS OF ARMS within the meaning of the Indian Arms Act, (excluding springs used for air-guns which are dutiable as hardware, under No. 68), all tools used for cleaning or putting together the same, all machines for making, loading, closing or capping cartridges for arms other than rifled arms and all other sorts of ammunition and military stores, and any articles which the Governor General in Council may by notification in the *Gazette of India* declare to be "ammunition" or "military stores" for the purposes of this Act.	....	,,	20 ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.* ARMS, AMMUNITION AND MILITARY STORES—*contd.*			
57	The following classes of ARMS, AMMUNITION AND MILITARY STORES:— (*a*) Articles falling under the 5th, 6th, 8th, 9th or 10th item of No. 52 when they appertain to a firearm falling under the 1st or 3rd item and are fitted into the same case with such firearm; (*b*) Arms forming part of the regular equipment of an officer entitled to wear diplomatic, military, naval or Royal Air Force or police uniform; (*c*) A revolver and an automatic pistol and ammunition for such revolver and pistol up to a maximum of 100 rounds per revolver or pistol (*i*) when accompanying a commissioned officer of His Majesty's regular forces or of the Indian Auxiliary Force or the Indian Territorial Force or a Gazetted Police Officer, or (*ii*) certified by the commandant of the corps to which such Officer belongs or in the case of an Officer not attached to any Corps, by the Officer Commanding the Station or District in which such Officer is serving, or in the case of a Police Officer by an Inspector-General or Commissioner of Police, to be imported by the Officer for the purpose of his equipment; (*d*) Swords for presentation as Army or Volunteer Prizes; (*e*) Arms, ammunition and Military Stores imported with the sanction of the Government of India for the use of any portion of the Military Forces of a State in India which may be maintained and organised for Imperial Service; (*f*) Morris tubes and patent ammunition imported by Officers Commanding British and Indian Regiments or Volunteer Corps for the instruction of their men;	....	....	Free.
58	EXPLOSIVES, namely, blasting gunpowder, blasting gelatine, blasting dynamite, blasting roburite, blastingtonite, and all other sorts, including detonators and blasting fuse.	....	*Ad valorem*	11 per cent.
	CARRIAGES AND CARTS.			
59	CARRIAGES AND CARTS including motor-cars, motor-cycles and motor-wagons, bicycles, tricycles, jinrikshas, bath chairs, perambulators, trucks, wheel-barrows, and all other sorts of conveyances and component parts thereof.	....	„	11 „ „
60	MOTOR-CARS, motor-cycles, motor-scooters, bicycles and tricycles and parts and accessories thereof: provided that such parts or accessories as are ordinarily also used for other purposes shall be dutiable at the rate of duty specified for such articles	....	„	20 „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation. Rs. a.	Duty. Rs. a. p.
	III.—Articles wholly or mainly manufactured—*contd.*			
	CHEMICALS, DRUGS AND MEDICINES.			
61	ANTI-PLAGUE SERUM	....	....	Free.
62	COPPERAS, green—			
	(1) Imported in bulk	cwt.	6 0	2½ per cent.
	(2) „ otherwise	„	*Ad valorem*	2½ „ „
63	OPIUM and its alkaloids	Seer of 80 tolas.	....	24 0 0
64	QUININE and other alkaloids of cinchona	....	....	Free.
65	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—			
	Alkali, Indian (saji-khar)	cwt.	4 0	11 per cent.
	Alum	„	13 8	11 „ „
	Arsenic (China mansil)	„	65 0	11 „ „
	„ other sorts	....	*Ad valorem*	11 „ „
	Bleaching Powder	cwt.	25 0	11 „ „
	Carbide of Calcium	„	28 0	11 „ „
	Carbonate of Ammonia	„	50 0	11 „ „
	Muriate of Ammonia	„	50 0	11 „ „
	Peppermint crystals	lb.	17 0	11 „ „
	Silicate of Soda	cwt.	14 0	11 „ „
	Soda ash including calcined natural soda and manufactured sesqui-carbonates.	„	7 0	11 „ „
	Soda bicarbonate	„	11 0	11 „ „
	Soda, caustic, solid	„	21 0	11 „ „
	„ flake	„	28 0	11 „ „
	„ powdered	„	29 0	11 „ „
	Soda Crystal in bulk	„	10 0	11 „ „
	Sulphate of Copper	„	22 8	11 „ „
	Sulphur (brimstone) flowers	„	11 0	11 „ „
	„ „ Roll	„	13 0	11 „ „
	„ „ Rough	„	10 0	11 „ „
	Trona or natural soda uncalcined	„	5 0	11 „ „
	All other sorts of Chemical products and preparations not otherwise specified.	....	*Ad valorem*	11 „ „
	Aloe-wood	....	„	11 „ „
	Asafœtida (hing)	cwt.	125 0	11 „ „
	„ coarse (hingra)	„	50 0	11 „ „
	Atary, Persian	....	*Ad valorem*	11 „ „
	Banslochan (bamboo camphor)	lb.	0 9	11 „ „
	Calumba root	cwt.	10 0	11 „ „
	Camphor, refined, other than powder	lb.	4 8	11 „ „
	Cassia Lignea	cwt.	28 0	11 „ „
	China root (chobchini) rough	„	17 8	11 „ „
	„ „ scraped	„	30 0	11 „ „
	Cubebs	„	175 0	11 „ „
	Galangal, China	„	12 8	11 „ „
	Salep	„	350 0	11 „ „
	Storax, liquid (rose mellos or salaras)	„	65 0	11 „ „
	All other sorts of drugs, medicines and narcotics.	....	*Ad valorem*	11 „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			Rs. a. p.
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS.			
66	The following AGRICULTURAL IMPLEMENTS, when constructed so that they can be worked by manual or animal power, namely, winnowers, threshers, mowing and reaping machines, elevators, seed-crushers, chaff-cutters, root-cutters, horse and bullock gears, ploughs, cultivators' scarifiers, harrows, clod-crushers, seed-drills, hay tedders, and rakes.†	....	....	Free.
67	CLOCKS AND WATCHES, and parts thereof.. ..	....	*Ad valorem*	20 per cent.
68	CUTLERY, excluding electroplated cutlery (see No. 70.)	....	„	11 „ „
69	The following DAIRY APPLIANCES, namely, cream separators, milk sterilizing or pasteurising plant, milk aerating and cooling apparatus, Churns, butter dryers and butter workers; also component parts of these appliances provided that they can be readily fitted into their proper places in the appliances for which they are imported and that they cannot ordinarily be used for other than dairy purposes.	....	....	Free
70	ELECTROPLATED WARE	....	*Ad valorem*	20 per cent.
71	HARDWARE, IRONMONGERY AND TOOLS, all sorts not otherwise specified.	....	„	11 „ „
72	INSTRUMENTS, APPARATUS, AND APPLIANCES, imported by a passenger as part of his personal baggage and in actual use by him in the exercise of his profession or calling.	....	....	Free.
73	TELEGRAPHIC INSTRUMENTS	....	*Ad valorem*	20 per cent.
74	TELEGRAPHIC INSTRUMENTS AND APPARATUS, and parts thereof, imported by or under the orders of a railway company.	....	„	2½ „ „
75	WATER-LIFTS, SUGAR-MILLS, OIL-PRESSES, and parts thereof, when constructed so that they can be worked by manual or animal power.	....	....	Free.
76	All other sorts of IMPLEMENTS, INSTRUMENTS, APPARATUS AND APPLIANCES, and parts thereof, not otherwise specified.	....	*Ad valorem*	11 per cent.

†With the exception of horse and bullock gears all the other implements mentioned in the article are, by an executive order, exempted from duty when so constructed as to be worked by power, other than manual or animal.

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	DYES AND COLOURS.			
77	DYEING AND TANNING SUBSTANCES, all sorts, and PAINTS AND COLOURS and painters' materials, all sorts—			
	Alizarine dye, dry, not exceeding 40 per cent.	lb.	3 12	11 per cent.
	" " " over 40 per cent. but not exceeding 50 per cent.	"	4 4	11 " "
	" " " over 50 per cent. but not exceeding 60 per cent.	"	4 12	11 " "
	" " " over 60 per cent. but not exceeding 70 per cent.	"	5 4	11 " "
	" " " over 70 per cent. but not exceeding 80 per cent.	"	5 12	11 " "
	" " " over 80 per cent. ..	"	6 12	11 " "
	" ,,moist, not exceeding 10 per cent.	"	0 10	11 " "
	" " " over 10 per cent. and not exceeding 16 per cent ..	"	1 0	11 " "
	" " " over 16 per cent. and not exceeding 20 per cent ..	"	1 4	11 " "
	" " " exceeding 20 per cent.	"	2 0	11 " "
	Aniline, moist	"	4 0	11 " "
	" dyes, black, of sulphur series	"	2 0	11 " "
	" " Congo red	"	3 0	11 " "
	All other aniline dyes, dry	"	4 8	11 " "
	Aniline Salts	"	*Ad valorem*	11 " "
	Avar bark	cwt.	4 8	11 " "
	Cochineal	lb.	1 0	11 " "
	Gallnuts (myrabolams)	....	*Ad valorem*	11 " "
	" Persian	cwt.	40 0	11 " "
	All other sorts of dyeing and tanning materials.	....	*Ad valorem*	11 " "
	Lead, red, dry	cwt.	38 0	11 " "
	" white, dry	"	42 0	11 " "
	Ochre, other than European, all colours ..	"	2 0	11 " "
	Turpentine	Imperial gallon.	9 0	11 " "
	Vermillion, Canton	box of 90 bundles.	....	11 " "
	Zinc, white, dry	....	*Ad valorem*	11 " "
	All other sorts of paints, colours and painters' materials not otherwise specified, including glue and putty.	....	"	11 " "
	FURNITURE, CABINETWARE AND MANUFACTURES OF WOOD.			
78	FURNITURE, CABINETWARE, and all manufactures of wood not otherwise specified.	..	"	11 " "

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	GLASSWARE AND EARTHENWARE.			
79	GLASS AND GLASSWARE, all sorts, Chinese and Japaneseware, lacquered ware, earthenware, China and porcelain.	....	*Ad valorem.*	11 per cent.
79*a*	AERATED WATER BOTTLES. (Codd's pattern) 8 ozs and under.	gross.	55 0	11 „ „
	Do. Do. over 8 ozs. ..	„	65 0	11 „ „
80	GLASS BANGLES, and beads and false pearls ..	„	*Ad valorem*	20 „ „
	HIDES, SKINS AND LEATHER.			
81	HIDES AND SKINS not otherwise specified, LEATHER AND LEATHER MANUFACTURES, all sorts, not otherwise specified.	....	„	11 „ „
	MACHINERY.			
82	MACHINERY, namely, prime-movers and component parts thereof, including boilers and component parts thereof; also including locomotive and portable engines, steam-rollers, fire-engines and other machines in which the prime-mover is not separable from the operative parts.	....	„	2½ „ „
	MACHINERY (and component parts thereof), meaning machines or sets of machines to be worked by electric, steam, water, fire or other power not being manual or animal labour or which, before being brought into use, require to be fixed with reference to other moving parts; and including belting of all materials for driving machinery Provided that the term does not include tools and implements to be worked by manual or animal labour and provided also that only such articles shall be admitted as component parts of machinery as are indispensable for the working of the machinery and are, owing to their shape or to other special quality, not adapted for any other purpose. *Note.*—This entry includes machinery and component parts thereof made of substances other than metal.	....	„	2½ „ „
83	MACHINERY AND COMPONENT Parts thereof, meaning machines or parts of machines to be worked by manual or animal labour, excluding those falling under items 66 and 69.	....	„	11 „ „
	METALS, IRON AND STEEL.			
84	IRON—			
	ANGLE—			
	Angle, T Best Yorkshire or Swedish and similar qualities.	ton	300 0	2½ „ „
	„ other kinds, if galvanised, tinned or lead coated.	„	300 0	2½ „ „
	„ other kinds	„	250 0	2½ „ „
	Angle and T, fabricated	....	*Ad valorem*	2½ „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	METALS, IRON AND STEEL—*contd.*			
	IRON—*contd.*			
	BAR, ROD AND CHANNEL, INCLUDING CHANNEL FOR CARRIAGES—			
	Bar, Best Yorkshire and similar qualities..	ton	300 0	2½ per cent.
	,, Swedish and similar qualities	,,	250 0	2½ ,, ,,
	,, ,, ,, ,, nail-rod, round-rod, and square under ¼ inch in diameter.	,,	275 0	2½ ,, ,,
	,, Swedish and charcoal, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ ,, ,,
	,, other kinds	ton	200 0	2½ ,, ,,
	,, ,, ,, nail-rod, round-rod and square under half inch in diameter.	,,	250 0	2½ ,, ,,
	,, ,, ,, if galvanized, tinned, or lead coated.	,,	275 0	2½ ,, ,,
	Channel, including channel for carriages ..	,,	250 0	2½ ,, ,,
	All other sorts	....	*Ad valorem*	2½ ,, ,,
	PIG	....	120 0	2½ ,, ,,
	RICE BOWLS	....	30 0	2½ ,, ,,
85	IRON OR STEEL—			
	ANCHORS AND CABLES	..	*Ad valorem*	2½ ,, ,,
	BEAMS, JOISTS, pillars, girders, screw-piles, bridge work and other such descriptions of iron or steel imported exclusively for building purposes; including also ridging, guttering and continuous roofing.	..	,,	2½ ,, ,,
	BOLTS and nuts, including hook bolts and nuts for roofing.	....	,,	2½ ,, ,,
	HOOPS AND STRIPS—			
	Hoops, Best Yorkshire or Swedish and similar qualities.	ton	370 0	2½ ,, ,,
	,, other kinds	,,	250 0	2½ ,, ,,
	,, other kinds if galvanised, tinned, chequered, planished, lead coated or aluminium coated.	,,	300 0	2½ ,, ,,
	Strips, Best Yorkshire or Swedish and similar qualities.	,,	370 0	2½ ,, ,,
	,, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	,,	300 0	2½ ,, ,,
	,, other kinds	,,	250 0	2½ ,, ,,
	NAILS, RIVETS AND WASHERS, ALL SORTS—			
	Nails, wire	cwt.	14 0	2½ ,, ,,
	Iron nails, rose, wire and flat-headed.. ..	,,	20 0	2½ ,, ,,
	,, ,, other kinds, including galvanised, tinned, or lead coated.	,,	35 0	2½ ,, ,,
	Rivets, black	,,	20 0	2½ ,, ,,
	,, other sorts	,,	20 0	2½ ,, ,,
	Washers, tinned or lead coated and dome-shaped, spring or locking washers.	,,	*Ad valorem*	2½ ,, ,,
	Other sorts	,,	20 0	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	METALS, IRON AND STEEL—*contd.*			
	IRON OR STEEL—*contd.*			
	PIPES AND TUBES, and fittings therefor, such as bends, boots, elbows, tees, sockets, flanges and the like.	cwt.	*Ad valorem*	2½ per cent.
	RAILS, CHAIRS, sleepers, bearing and fish plates, spikes (commonly known as dog spikes), switches, and crossings, other than those described in No. 94, also lever boxes, clips, and tie-bars.	....	,,	2½ ,, ,,
	SHEETS AND PLATES, not fabricated, all sorts, excluding discs, circles and expanded metal sheets which are dutiable under No. 87—			
	Sheets and plates, Best Yorkshire and similar qualities.	ton	400 0	2½ ,, ,,
	,, ,, Swedish and charcoal ..	,,	350 0	2½ ,, ,,
	,, ,, Swedish and charcoal if galvanized, tinned, or lead coated.	,,	400 0	2½ ,, ,,
	Sheets, corrugated, galvanised or black up to and including 26 Gauge.	,,	300 0	2½ , ,,
	Sheets, corrugated, galvanised or black above 26 Gauge.	,,	375 0	2½ , ,,
	Sheet and plate cuttings	,,	200 0	2½ ,, ,,
	Tinplates	,,	400 0	2½ ,, ,,
	,, cutting's	,,	*Ad valorem*	2½ ,, ,,
	Sheets, other kinds, black, up to and including ⅛ inch thick.	,,	180 0	2½ ,, ,,
	Sheets, other kinds if galvanised, tinned, planished, lead coated or aluminium coated up to and including 26 gauge, also chequered and galvanised plates.	,,	375 0	2½ ,, ,,
	Sheets, other kinds, if galvanised, tinned, planished, lead coated or aluminium coated, above 26 Gauge.	,,	475 0	2½ ,, ,,
	Sheets and plates, fabricated, all sorts excluding discs, circles, and expanded metal sheets which are dutiable under No. 87.	,,	*Ad valorem*	2½ ,, ,,
	Wire, including piano-wire, fencing wire and wire rope excluding wire-netting (which is dutiable under No. 87.)	,,	,,	2½ ,, ,,
86	STEEL—			
	ANGLE—			
	Angle, T if galvanised, tinned, or lead coated	ton	200 0	2½ ,, ,,
	,, ,, all other sorts	,,	160 0	2½ ,, ,,
	,, and T. fabricated	....	*Ad valorem*	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	METALS, IRON AND STEEL—*contd.*			
	STEEL—*contd.*			
	BAR, ROD, AND CHANNEL, including channel for carriages—			
	Bar, Swedish and similar qualities	ton	250 0	2½ per cent.
	,, common merchant	,,	250 0	2½ ,, ,,
	,, nail-rod, round-rod, and square, other than Swedish or similar qualities, under ½ inch in diameter.	,,	180 0	2½ ,, ,,
	,, galvanized, tinned, lead coated, planished or polished.	,,	275 0	2½ ,, ,,
	,, crucible, (cast steel) including—			
	(*a*) High Speed	....	*Ad valorem*	2½ ,, ,,
	(*b*) Carbon Steel	....	,,	2½ ,, ,,
	,, High tensile	....	,,	2½ ,, ,,
	Channel, including channel for carriages ..	ton.	180 0	2½ ,, ,,
	Spring, blistered and tub steel (including bars.)	....	*Ad valorem*	2½ ,, ,,
	All other sorts	....	,,	2½ ,, ,,
	INGOTS, BLOOMS, BILLETS AND SLABS ..	....	,,	2½ ,, ,,
87	All sorts of IRON AND STEEL and manufactures thereof, not otherwise specified—*			
	Iron or steel cans or drums, when imported containing petroleum, which is separately assessed to duty under No. 33, namely :—			
	Iron or steel cans, tinned	can	0 6	11 ,, ,,
	Iron or steel cans or drums, not tinned, of two gallons capacity—			
	(*a*) with faucet caps	can or drum	1 8	11 ,, ,,
	(*b*) ordinary	,,	0 4	11 ,, ,,
	Drums of four gallons capacity—			
	(*a*) with faucet caps	drum.	2 4	11 ,, ,,
	(*b*) ordinary	,,	2 0	11 ,, ,,
	Iron or steel cans or drums when imported not containing petroleum.	....	*Ad valorem*	11 ,, ,,
	Iron or steel, all other sorts, including discs or circles and wire-netting.	....	,,	11 ,, ,,
	METALS, OTHER THAN IRON AND STEEL			
88	CURRENT SILVER, NICKEL, BRONZE, AND COPPER COIN of the Government of India.	....	....	Free.
89	GOLD AND SILVER BULLION AND COIN	....	....	,,
90	GOLD PLATE, gold thread and wire and gold manufacturers, all sorts.	....	*Ad valorem*	20 ,, ,,
91	LEAD, SHEETS, for tea-chests	..	,,	2½ ,, ,,

* Include perforated steel screens when imported in rolls or in length and not cut to any special size or shape.

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*		Rs. a.	
92	SILVER PLATE, SILVER THREAD and wire and SILVER MANUFACTURES, all sorts.	....	*Ad valorem*	20 per cent.
93	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—			
	Aluminium circles	lb.	1 6	11 ,, ,,
	,, sheets	,,	1 4	11 ,, ,,
	Brass, patent or yellow metal sheets and sheathing, weighing 1 lb. or above per square foot, and braziers and plates.	cwt	72 0	11 ,, ,,
	,, patent or yellow metal in gots	,,	35 0	11 ,, ,,
	,, ,, ,, ,, (old)	,,	30 0	11 ,, ,,
	,, sheets, flat or in rolls, and sheathing, weighing less than 1 lb. per square foot.	....	*Ad valorem*	11 ,, ,,
	,, wire	...	,,	11 ,, ,,
	,, all other sorts	....	,,	11 ,, ,,
	Copper, bolt and bar, rolled	....	,,	11 ,, ,,
	,, braziers, sheets, plates and sheathing..	cwt.	80 0	11 ,, ,,
	,, sheets, planished	....	*Ad valorem*	11 ,, ,,
	,, nails and composition nails	....	,,	11 ,, ,,
	,, old	cwt.	40 0	11 ,, ,,
	,, pigs, tiles, ingots cakes, bricks and slabs.	,,	55 0	11 ,, ,,
	,, China, white, copperware	lb.	4 0	11 ,, ,,
	,, foil or dankpana, white, 10 or 11 in. × 4 to 5 in.	hundred leaves	4 0	11 ,, ,,
	,, foil or dankpana, coloured, 10 to 11 in. × 4 to 5 in.	,,	5 0	11 ,, ,,
	,, wire, including phosphor-bronze ..	.. .	*Ad valorem*	11 ,, ,,
	,, all other sorts, unmanufactured and manufactured, except current coin of the Government of India which is free.	....	,,	11 ,, ,,
	German silver	....	,,	11 ,, ,,
	Lead, pig	cwt.	20 0	11 ,, ,,
	Lead, all sorts (except sheets for tea chests) ..	....	*Ad valorem.*	11 ,, ,,
	Quicksilver	lb.	2 6	11 ,, ,,
	Shot bird	cwt.	40 0	11 ,, ,,
	Tin, block	,,	120 0	7½ ,, ,,
	,, foil, and other sorts	....	*Ad valorem*	11 ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names and Articles.	Per	Tariff Valuation	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*			
93	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—*contd.*		Rs. a.	
	Zinc or spelter, tiles, slabs or plates ..	cwt.	28 0	11 per cent.
	,, ,, all other sorts including boiler tiles.	....	*Ad valorem*	11 ,, ,,
	All other sorts of metals and manufactures thereof.	....	,,	11 ,, ,,
	PAPER, PASTEBOARD AND STATIONERY.			
94	TRADE CATALOGUES AND ADVERTISING CIRCULARS IMPORTED BY PACKET, BOOK OR PARCEL POST.	....	....	Free.
95	PAPER AND ARTICLES MADE OF PAPER AND PAPIER MACHE, PASTEBOARD, MILLBOARD, AND CARD-BOARD all sorts, and STATIONERY including ruled or printed forms and account and manuscript books, drawing and copy books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet form; including also wastepaper and old newspapers for packing but excluding trade catalogues and advertising circulars imported by packet, book, or parcel post.	....	*Ad valorem*	11 per cent.
	Old news papers in bales	cwt.	10 0	11 ,, ,,
	RAILWAY PLANT AND ROLLING STOCK.			
96	RAILWAY MATERIAL for permanent-way and rolling stock, namely, cylinders, girders, and other material for bridges, rails, sleepers, bearing and fish-plates, fish-bolts, chairs, spikes, crossings, sleeper fastenings, switches, interlocking apparatus, brake gear, couplings and springs, signals, turn-tables, weigh-bridges, engines, tenders, carriages, wagons, traversers, trollies, trucks, and component parts thereof; also the following articles when imported by or under the orders of a railway company, namely, cranes, water cranes, water tanks and standards, wire and other materials for fencing. Provided that for the purpose of this entry "railway" means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a Native State under the suzerainty of His Majesty and also such tramways as the Governor-General in Council may, by notification in the *Gazette of India*, specifically include therein	....	*Ad valorem*	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty
	III.—Articles wholly or mainly manufactured—*contd.*			
	RAILWAY PLANT AND ROLLING STOCK —*contd.*			
16	RAILWAY MATERIAL for permanent-way, etc. —*contd.* Provided also that only such articles shall be admitted as component parts of railway material as are indispensable for the working of railways and are, owing to their shape or to other special quality, not adapted for any other purpose.			
	YARNS AND TEXTILE FABRICS.			
97	COTTON TWIST AND YARN, and COTTON SEWING OR DARNING THREAD.	....	....	Free.
98	COTTON PIECE GOODS, thread other than sewing or darning thread, and all other manufactured cotton goods not otherwise specified.	....	*Ad valorem*	11 per cent.
99	SECOND-HAND OR USED GUNNY BAGS made of jute	....	....	Free.
100	YARNS AND TEXTILE FABRICS, that is to say —			
	Flax, twist and yarn and manufactures of flax	....	*Ad valorem*	11 per cent
	Haberdashery and millinery excluding articles made of Silk.	...	,,	11 ,, ,,
	Hemp manufactures	....	,,	11 ,, ,,
	Hoisery excluding articles made of Silk ..	....	,,	11 ,, ,,
	Jute twist and yarn and jute manufactures, excluding second-hand or used gunny bags (*see* No. 99).	....	,,	11 ,, ,,
	Silk piece-goods, (white or coloured, plain or figured and all widths) and apparel, Japan and China (including Hongkong) Japan :—			
	Paj, Tharna; Jemken and Nankin, all kinds, including striped printed, embossed and pine-apples.	lb.	27 0	20 ,, ,,
	Satins and Kohaku, all kinds, including striped, printed, woven and embossed.	,,	32 0	20 ,, ,,
	Twill, all kinds	,,	28 0	20 ,, ,,
	Jarina (Gold embroidered)	,,	30 0	20 ,, ,,
	Fugi and Boseki, all kinds	,,	25 0	20 ,, ,,
	Fancies, printed and woven, including Georgettes, Kobe-crepes, crepe-de-chine, ninons and gauzes.	,,	38 0	20 ,, ,,
	Embroideries, all kinds including apparel ..	,,	57 0	20 ,, ,,
	Apparel other than embroidered, including Shawls, dhuties, scarves, mufflers, handkerchiefs and hosiery.	,,	42 0	20 ,, ,,
	Dupettas and China Silk patkas	,,	25 0	20 ,, ,,
	Burmese Scarves (*a*) Paj	,,	30 0	20 ,, ,,
	,, ,, (*b*) other kinds	,,	45 0	20 ,, ,,
	Cotton and Silk mixed satins, embroidered..	,,	16 0	20 ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	YARNS AND TEXTILE FABRICS—*contd.*		Rs. a.	
	Silk piece-goods (white or coloured, plain or figured and all widths) and apparel, Japan and China (including Hongkong)— *contd.*			
	Cotton and silk mixed satins, other kinds ..	lb.	11 0	20 per cent.
	,, ,, Hosiery	,,	30 0	20 ,, ,,
	,, ,, Boseki all kinds ..	,,	9 0	20 ,, ,,
	Silk fents	,,	16 0	20 ,, ,,
	Other kinds including mixed apparel ..	,,	*Ad valorem*	20 ,, ,,
	China (including Hongkong) Honans, all kinds, apparel and patkas	,,	9 0	20 ,, ,,
	Shantungs, all kinds, apparel and Patkas ..	,,	5 8	20 ,, ,,
	Corded, all kinds, except Woochow	,,	8 0	20 ,, ,,
	White cord Woochow, all kinds	,,	18 0	20 ,, ,,
	Crepe, Gauze and paj, all kinds	,,	23 0	20 ,, ,,
	Satins and fancies, all kinds	,,	32 0	20 ,, ,,
	Other kinds	,,	*Ad valorem*	20 ,, ,,
	Silk piece-goods, other than Japan and China (including Hongkong) and other manufactures of silk	....	,,	20 ,, ,,
	Silk yarn, noils and warps and silk thread ..	....	,,	11 ,, ,,
	Woollen yarn, knitting wool and other manufactures of wool including felt.	....	,,	11 ,, ,,
	All other sorts of yarns and textile fabrics, not otherwise specified.	....	,,	11 ,, ,,
	MISCELLANEOUS.			
101	AEROPLANES, aeroplane plants, aeroplane engines and aeroplane engine parts.	....	....	2½ ,, ,,
102	ART, the following works of:—(1) statuary and pictures intended to be put up for the public benefit in a public place, and (2) memorials of a public character intended to be put up in a public place, including the materials used, or to be used in their construction, whether worked or not.	....	....	Free.
103	ART, works of, excluding those specified in No. 102.	....	*Ad valorem*	11 per cent.
104	BOOKS, printed, including covers for printed books, maps, charts, and plans, proofs, music and manuscripts.	....	....	Free.
105	BRUSHES AND BROOMS	....	*Ad valorem*	11 per cent
106	BUILDING AND ENGINEERING MATERIALS, including asphalt, bricks, cement, chalk and lime, clay, pipes of earthenware, tiles and all other sorts of building and engineering materials not otherwise specified.	....	,,	11 ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*		Rs. a.	
	CHINA CLAY	ton.	180 0	11 per cent.
	PORTLAND CEMENT	cwt.	4 4	11 ,, ,,
107	CANDLES	....	*Ad valorem*	11 ,, ,,
108	CINEMATOGRAPH FILMS.—			
	Exposed standard positive films new or used ..	foot.	0 4	20 ,, ,,
	Other films	....	*Ad valorem*	20 ,, ,,
109	CORDAGE AND ROPE AND TWINE OF VEGETABLE FIBRE.	....	,,	11 ,, ,,
110	FIREWORKS	....	,,	20 ,, ,,
111	FURNITURE, TACKLE AND APPAREL, not otherwise described, for steam, sailing, rowing and other vessels.	.. .	,,	11 ,, ,,
112	Ivory, manufactured..	....	,,	20 ,, ,,
113	JEWELLERY AND JEWELS	....	,,	20 ,, ,,
114	MATCHES—			Rs. a.
	(1) In boxes containing not more than 100 matches.	Gross of boxes.	....	0 12
	(2) In boxes containing more than 100 matches	For every 100 matches or fraction thereof in each box, per gross of boxes.	....	0 12
115	MATS AND MATTINGS..	....	*Ad valorem*	11 per cent.
116	OIL CAKES	....	,,	11 ,, ,,
117	OILCLOTH AND FLOOR CLOTH..	....	,,	11 ,, ,,
118	PACKING—ENGINE AND BOILER—all sorts, excluding packing forming a component part of any article included in No. 82 and No. 96.	....	,,	11 ,, ,,
119	PERFUMERY, excluding perfumed spirits (*see* No. 10)—			
	Gowla husked and unhusked	cwt.	65 0	11 ,, ,,
	Kapurkachri (zedoary)	,,	25 0	11 ,, ,,
	Patch leaves (patchouli)	,,	35 0	11 ,, ,,
	Rose-flowers, dried	,,	25 0	11 ,, ,,
	Rose-water	Imperial gallon.	5 0	11 ,, ,,
120	PITCH, TAR AND DAMMER except Dammer Batu ..	....	*Ad valorem*	11 ,, ,,
	Dammer Batu	cwt.	7 0	11 ,, ,,
121	PNEUMATIC RUBBER TYRES and tubes for motor cars, motor lorries, motor-cycles, motor-scooters, bicycles and tricycles.	,,	*Ad valorem*	20 ,, ,,
122	POLISHES AND COMPOSITIONS..	....	,,	11 ,, ,,

Schedule II.—(Import Tariff)—*concluded.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*			
123	PRINTING AND LITHOGRAPHING MATERIAL, namely, presses, type, ink, brass rules, composing sticks, chases, imposing tables, and lithographic stones, alluminium lithographic plates stereo-blocks, roller moulds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper folding machines, and paging and numbering machines, but excluding paper (*see* No. 95).*	....	*Ad valorem*	2½ per cent.
124	PRINTS, ENGRAVINGS AND PICTURES, including photographs and picture-cards.	....	,,	20 ,, ,,
125	RACKS for the withering of tea leaf	....	,,	2½ ,, ,,
126	RUBBER tyres for motors and motor cycles, and rubber tubes for tyres, and other manufactures of rubbers not otherwise specified.	....	,,	11 ,, ,,
127	SHIPS AND OTHER VESSELS for inland and harbour navigation, including steamers, launches, boats and barges, imported entire or in sections.	....	,,	2½ ,, ,,
128	SMOKERS' REQUISITES, excluding tobacco (*see* Nos. 25 to 27). and matches (No. 114)	....	,,	20 ,, ,,
129	SOAP	....	,,	11 ,, ,,
130	STARCH AND FARINA	....	,,	11 ,, ,,
131	STONE AND MARBLE, and articles made of stone and marble.	....	,,	11 ,, ,,
132	TEA-CHESTS of Metal or wood whether imported entire or in sections, provided that the Collector of Customs is satisfied that they are imported for the purpose of the packing of tea for transport in bulk.	....	,,	2½ ,, ,,
133	TOILET REQUISITES, not otherwise specified ..	....	,,	11 ,, ,,
134	TOYS, playing cards and requisites for games and sports.	....	,,	20 ,, ,,
135	UMBRELLAS, including parasols and sunshades, and fittings therefor.	....	,,	11 ,, ,,
136	ALL OTHER ARTICLES wholly or mainly manufactured, not otherwise specified.	....	,,	11 ,, ,,
	IV.—Miscellaneous and unclassified.			
137	ANIMALS, living, all sorts	....	....	Free.
138	CORAL	....	*Ad valorem*	11 per cent.
139	SPECIMENS illustrative of natural science, including also antique coins and medals.	....	....	Free.
140	ALL OTHER ARTICLES NOT OTHERWISE SPECIFIED, including articles imported by post.	....	*Ad valorem*	11 per cent.

* In exercise of the power conferred by section 23 of the Sea Customs Act 1878 (VIII of 1878), the Governor-General in Council is pleased to exempt from the payment of import duty leviable under Parts III and IV of Schedule II to the Indian Tariff Act, 1894 (VIII of 1894), the following agricultural implements when so constructed as to be worked by power, other than manual or animal namely:—Winnowers, Threshers, Mowing and Reaping Machines, Elevators, Seed-crushers, Chaff-cutters, Root-cutters, Ploughs, Cultivators, Scarifiers, Harrows, Clod-crushers, Seed-drills, Hay-tedders and Rakes.

Schedule III.—(Export Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Rate of duty.
	Jute other than Bimlipatam Jute.		Rs. a. p.	Rs. a. p.
1	RAW JUTE—			
	(1) Cuttings	Bale of 400 lbs.	....	1 4 0
	(2) All other descriptions	,,	....	4 8 0
2	JUTE MANUFACTURES when not in actual use as coverings, receptacles or bindings for other goods.			
	(1) Sacking (cloth, bags, twist, yarn, rope and twine).	Ton of 2,240 lbs.	....	20 0 0
	(2) Hessians and all other descriptions of jute manufactures not otherwise specified.	,,	....	32 0 0
	RICE.			
3	RICE, husked or unhusked, including rice flour, but excluding rice bran and rice dust, which are free.	Indian maund of 82⅔ lbs. avoirdupois weight.	....	0 3 0
	TEA.			
4	TEA	100 lbs.	....	1 8 0
5	RAW HIDES AND SKINS IF EXPORTED FROM BURMA—			
	(1) Arsenicated and air dried hides—			
	(*a*) Cows (including calf skins)	lb.	0 5 0	15 per cent
	(*b*) Buffaloes (Do. do.)	,,	0 2 0	15 ,,
	(2) Dry salted hides—			
	(*a*) Cows (including calf skins)	,,	0 2 0	15 ,,
	(*b*) Buffaloes (Do. do.)	,,	0 1 0	15 ,,
	(3) Wet salted hides—			
	(*a*) Cows (including calf skins)	,,	0 2 6	15 ,,
	(*b*) Buffaloes (Do. do.)	,,	0 1 0	15 ,,
	(4) Goat and Kid Skins	piece.	1 0 0	15 ,,
	(5) Sheepskins	,,	0 8 0	15 ,,
	RAW HIDES AND SKINS IF EXPORTED FROM ANY PLACE IN BRITISH INDIA OTHER THAN BURMA :—			
	(1) Arsenicated and air dried hides—			
	(*a*) Cows (including calf skins,—			
	Framed	lb.	0 6 0	15 ,,
	Unframed	,,	0 2 6	15 ,,
	(*b*) Buffaloes (including calf skins)—			
	Framed ..	,,	0 2 6	15 ,,
	Unframed ..	,,	0 1 6	15 ,,
	(2) Dry salted hides—			
	(*a*) Cows (including calf skins)	,,	0 2 0	15 ,,
	(*b*) Buffaloes (Do. do.)	,,	0 1 1	15 ,,
	(3) Wet salted hides—			
	(*a*) Cows (including calf skins)	,,	0 2 0	15 ,,
	(*b*) Buffaloes (Do. do.)	,,	0 1 0	15 ,,
	(4) Goat and Kid Skins	piece.	1 0 0	15 ,,
	(5) Sheep Skins	,,	0 8 0	15 ,,

N. B.—Provided that, subject to such conditions as the Governor-General in Council may by notification in the *Gazette of India* prescribe, a rebate shall be granted to the exporter of two-third of the duty levied on hides and skins exported to any part of His Majesty's Dominions or of the territories of any Indian Prince or Chief under the suzerainty of His Majesty or of any territories under the protection of His Majesty or in respect of which a mandate of the League of Nations is exercised by the Government of any part of His Majesty's Dominions.

THE VICTORIA CROSS.

The announcement, made at the Delhi Durbar in 1911, that in future Indians would be eligible for the Victoria Cross gave satisfaction which was increased during the War and afterwards by the award of that decoration to the following :—

Subadar (then Sepoy) Khudadad Khan, 129th Baluchis—On 31st October 1914, at Hollebeke, Belgium, the British Officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded remained working his gun until all the other five men of the gun detachment had been killed.

Naick Darwan Sing Negi, 1-39th Garhwal Rifles.—For great gallantry on the night of the 23rd-24th November 1914 near Festubert, France, when the Regiment was engaged in retaking and clearing the enemy out of our trenches, and, although wounded in two places in the head, and also in the arm, being one of the first to push round each successive traverse, in the face of severe fire from bombs and rifles at the closest range.

Subadar (then Jamadar) Mir Dast, 55th Coke's Rifles.—For most conspicuous bravery and great ability at Ypres on 26th April 1915, when he led his platoon with great gallantry during the attack, and afterwards collected various parties of the Regiment (when no British Officers were left) and kept them under his command until the retirement was ordered. Jamadar Mir Dast subsequently on this day displayed remarkable courage in helping to carry eight British and Indian Officers into safety, whilst exposed to very heavy fire.

Rifleman Kulbir Thapa, 2-3rd Gurkha Rifles.—For most conspicuous bravery during operations against the German trenches south of Mauquissart. When himself wounded, on the 25th September 1915, he found a badly wounded soldier of the 2nd Leicestershire Regiment behind the first line German trench, and though urged by the British soldier to save himself, he remained with him all day and night. In the early morning of the 26th September, in misty weather, he brought him out through the German wire, and, leaving him in a place of comparative safety returned and brought in two wounded Gurkhas one after the other. He then went back in broad daylight for the British soldier and brought him in also, carrying him most of the way and being at most points under the enemy's fire.

Havildar (then Lance-Naick) Lala, 41st Dogras.—Finding a British Officer of another regiment lying close to the enemy he dragged him into a temporary shelter which he himself had made, and in which he had already bandaged four wounded men. After bandaging his wounds he heard calls from the Adjutant of his own Regiment who was lying in the open severely wounded. The enemy were not more than one hundred yards distant, and it seemed certain death to go out in that direction, but Lance-Naik Lala insisted on going out to his Adjutant, and offered to crawl back with him on his back at once. When this was not permitted, he stripped off his own clothing to keep the wounded officer warmer and stayed with him till just before dark when he returned to the shelter. After dark he carried the first wounded officer back to the main trenches, and then, returning with a stretcher carried back his Adjutant. He set a magnificent example of courage and devotion to his officers.

Sepoy Chatta Singh, 9th Bhopal Infantry.—For most conspicuous bravery and devotion to duty in leaving cover to assist his Commanding Officer who was lying wounded and helpless in the open. Sepoy Chatta Singh bound up the officer's wound and then dug cover for him with his entrenching tool, being exposed all the time to very heavy rifle fire. For five hours until nightfall he remained beside the wounded officer shielding him with his own body on the exposed side. He then, under cover of darkness, went back for assistance, and brought the officer into safety.

Naick Shahamad Khan, 89th Punjabis—For most conspicuous bravery. He was in charge of a machine-gun section in an exposed position in front of and covering a gap in our new line within 150 yards of the enemy's entrenched position. He beat off three counter-attacks, and worked his gun single-handed after all his men, except two belt-fillers, had become casualties. For three hours he held the gap under very heavy fire while it was being made secure. When his gun was knocked out by hostile fire he and his two belt-fillers held their ground with rifles till ordered to withdraw. With three men sent to assist him he then brought back his gun, ammunition, and one severely wounded man unable to walk. Finally, he himself returned and removed all remaining arms and equipment except two shovels. But for his great gallantry and determination our line must have been penetrated by the enemy.

Lance-Dafedar Govind Singh, 28th Cavalry.—For most conspicuous bravery and devotion to duty in thrice volunteering to carry messages between the regiment and brigade headquarters a distance of 1½ miles over open ground which was under the observation and heavy fire of the enemy. He succeeded each time in delivering his message although on each occasion his horse was shot, and he was compelled to finish the journey on foot.

Rifleman Karan Bahadur Rana, 2-3rd Gurkha Rifles.—For conspicuous bravery and resource in action under adverse conditions, and utter contempt of danger during an attack. He with a few other men succeeded, under intense fire, in creeping forward with a Lewis gun in order to engage an enemy machine gun which had caused severe casualties to officers and other ranks who had attempted to put it out of action. No. 1 of the Lewis gun party opened fire and was shot immediately. Without a moment's hesitation Karan Bahadur pushed the dead man off the gun, and in spite of bombs thrown at him and heavy fire from both flanks, he opened fire and knocked out the enemy machine gun crew. Then switching his fire on the enemy bombers and riflemen in front of him, he silenced their fire. He kept his gun in action, and showed the greatest coolness in removing defects which had twice prevented the gun from firing. He did magnificent work during the remainder of the day, and when a withdrawal was ordered,

assisted with covering fire until the enemy was close to him. He displayed throughout a very high standard of valour and devotion to duty.

Ressaidar Badlu Singh, 14th Lancers, attached 29th Lancers.—For most conspicuous bravery and self-sacrifice on the morning of the 23rd September 1918, when his squadron charged a strong enemy position on the west bank of the River Jordan, between the river and Kh. es Samarivch Village. On nearing the position Ressaidar Badlu Singh realised that the squadron was suffering casualties from a small hill on the left front occupied by machine guns and 200 infantry. Without the slightest hesitation he collected six other ranks and with the greatest dash and an entire disregard of danger charged and captured the position, thereby saving very heavy casualties to the squadron. He was mortally wounded on the very top of the hill when capturing one of the machine guns single-handed, but all the machine guns and infantry had surrendered to him before he died. His valour and initiative were of the highest order.

Rifleman Gobar Sing Negi, 2nd Battalion, 39th Garhwal Rifles.—For most conspicuous bravery on 10th March 1915 at Neuve Chapelle. During an attack on the German position he was one of a bayonet party with bombs who entered their main trench, and was the first man to go round each traverse, driving back the enemy until they were eventually forced to surrender. He was killed during this engagement.

Sepoy Ishaw Singh 28th Punjabis.—For devotion and bravery "quite beyond all praise" in Waziristan on 10th April, 1921 He received a severe gunshot wound in the chest while serving a Lewis gun, and when all the havildars had been killed or disabled he struggled to his feet, called to his assistance two men, and charged and recovered the gun, restoring it to action. He refused medical attention, insisting first on pointing out where the other wounded were and on carrying water to them. While the medical man was attending to these wounded he shielded him with his body and he submitted to medical attention himself only after he was exhausted through three hours' continual effort and by loss of blood.

PASSPORT REGULATIONS.

The following are the chief regulations concerning passports: -

1. Applications for Indian Passports must be made in the prescribed form, and submitted either direct or through the local authority—(*a*) in the case of a resident in British India, to the Local Government or Local Administration concerned; (*b*) in the case of a resident in a Native State, to the Agent to the Governor-General or Political Resident concerned.

2. The charge for an Indian Passport is Re. 1.

3. Indian Passports are granted to—(*a*) Natural-born British subjects; (*b*) wives and widows of such persons; (*c*) Persons naturalized in the United Kingdom, in the British Colonies or in India; and (*d*) Subjects of Native States in India. A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

4. Passports are granted upon the production of a declaration by the applicant (in the case of child under 15 requiring a separate passport by the child's parent or guardian) in the prescribed form of application verified by a declaration made by a *Political Officer, Magistrate, Justice of the Peace, Police Officer not below the rank of Superintendent* or *Notary Public*, resident in India. If possible the declaration should be signed by an officer of the district in which the applicant is resident. Otherwise the issue of a Passport may be delayed while enquiries are being made from the local authorities.

5. If the applicant for a Passport be a Naturalized British subject, the certificate of naturalization must be forwarded with the form of application to the Officer empowered to grant the Passport. It will be returned with the Passport to the applicant through the person who may have verified the declaration. Naturalized British subjects will be described as such, in their Passports, which will be issued subject to the necessary qualifications.

6. Small duplicate unmounted photographs of the applicant (and wife, if to be included) must be forwarded with the application for a Passport, one of which must be certified on the back by the person verifying the declaration made in the application form.

7. Indian Passports are not available beyond two years from the date of issue. They may be renewed by any competent British Authority for four further periods of two years each after which fresh Passports must be obtained. The fee for each renewal is Re. 1.

8. Passports cannot be issued or renewed on behalf of persons already abroad: such persons should be told to apply for Passports to the London Foreign Office or nearest British Mission or Consulate. Passports must not be sent out of India by post.

9. In the case of an applicant for a Passport being unable to write English a transcription in English should be placed below the applicant's vernacular signature in the form of application. In the case of an illiterate person, a thumb impression should be substituted for a signature on the form of application, which should be certified by the person verifying the declaration.

Parda nashin or gosha women desirous of travelling from India to Malaya, the Straits Settlements, the East Africa Protectorate, Uganda, Zanzibar, Mauritius, the Nyassaland Protectorate and the Union of South Africa are exempted from the necessity of attaching their photographs to their applications for passports or of appearing in person before the passport issuing authorities.

Racing.

Calcutta.

[*Season* 1920-21].

Governor's Cup. Distance 1¼ miles.—

Messrs. Douetil and Page's Cally (7st 8llbs.), Stokes 1
Mr. Thaddeus' Unitoi (8st. 8lbs), J. G. Meekings 2
Mr. Thaddeus' Misri Lal (7st. 8lbs.), Walker 3
Mr. De Souza's Mordennis (8st. 13lbs.), Wood 4

Won by three-quarters of a length; one length. Time—3 mins.

Metropolitan Plate. Distance 6 furlongs.—

Mr. Douetil's Pompano (7st. 10lbs., dec. 1lb.), Bond 1
Mr. Swan's Goldgainer (8st. 13lbs.), Northmore 2
H. H. the Maharani of Cooch Behar's Noutbutweel (8st. 12lbs.), Harrison 3
Mr. Avasia's Eudoxus (7st. 10lbs), Dobie 4

Won by one length, a short head and one length. Time—1min. 13 3-5 secs.

Prince of Wales' Plate. Distance 1 mile.—

Mr. Galstaun's Simon's Choice (8st. 4lbs.), Shatwell 1
Mr. Lander's Allan Brig (7st. 6lbs.), Stokes 2
Mr. De Souza's Violinist (7st., dec 2lbs.), Meekings 3
Mr. De Souza's Mordennis (8st 13lbs.), Wood 4

Won by half a length and one and a quarter lengths. Time—1 min. 40 secs.

Carmichael Cup. Distance 1¼ miles.—

General Raja Sir Hari Singh's GoodHealth (7st. 7lbs., cd. 7st. 11lbs.), Beasley .. } 1
Mr. Thaddeus' Unitoi (7st. 7lbs.), J. G. Meekings .. .. }
Mr. Low's St. Nathey (7st. 7lbs., cd. 7st. 8lbs.), Young 3
Mr. Galstaun's St. Quin (9st.), Shatwell 4

Won by dead heaters by half a length. Time—2 mins. 6 secs.

Macpherson Cup. Distance 1 mile 3 furlongs.—

Mr. Thaddeus' Unitoi (8st. 13lbs.), Ruiz 1
Mr. De Souza's Mordennis (8st. 12lbs.), Wood 2
Mr. Galstaun's Crenides (8st. 5lbs.), Shatwell 3
Messrs. Douetil and Page's Cally (8st. 3lbs.), Harrison 4

Won by a short head, half a length and one and a half lengths. Time—2 mins. 29 secs.

King-Emperor's Cup. Distance 1 mile.—

Mr. Sangidas Jesiram's Not Much (9st. 3lbs.), Riley.. 1
Mr. Goculdass' Roubaix (9st. 3lbs.), W. Huxley 2
Mr. R. R. S.'s Quarryman (9st. 3lbs.), Barden 3
H. H. the Maharajah of Rajpipla's Charlie's Smile (9st. 3lbs.), Ruiz 4

Won by one length, one and a half lengths and a short head. Time—1min. 38 4-5 secs.

Grand Military Chase. Distance 2½ miles.—

Major McCudden's Truncheon (11st. 10lbs), Owner 1
Colonel Commandant Pooler's Traveller (11st. 10lbs.), Captain Barker 2
Lt.-Colonel Gill and Capt. Rayneau's Centre (11st. 10lbs.), Captain Coles 3

Won by six lengths and distance. Time—5mins. 17 4-5 secs.

Burdwan Cup. Distance 1¼ miles.—

Mr. Goculdass' Silver Saint (11st. 3lbs.), Lyons 1
Genl. Raja Sir Hari Singh's Sunstroke (9st. 11lbs.), Mr. Frewell 2
Mr. Douetil's Ugly Gosling (11st. 3lbs.), Murrell 3
Mr. Harrison's Gavrelle (10st. 3lbs.), Thompson 4

Won by three lengths, two lengths and six lengths. Time—3 mins. 15 2-5 secs.

Prince of Wales' Cup. Distance 6 furlongs.—

Mr. Galstaun's Galway Gate (9st. 3lbs.), Bellhouse 1
Mr. Goculdass' Bell Metal (7st. 12lbs), Walker 2
Mr. Jesiram's Quarryman (9st. 3lbs.), Riley.. 3
Mr. Goculdas' Plymouth Rock (8st. 7lbs.), Huxley 4

Won by two lengths, one and a quarter lengths and one and a half lengths. Time—1 min. 13 secs.

Bengal Cup. Distance 1½ miles.—

Mr. Vernon's Sugar Cane (10st. 1lb.), A. C. Walker 1
Mr. Bashir Ali's Black Friar (7st. 2lbs.), Ritchie 2
Mr. Essajee's Steel Blue (11st. 12lbs.), Huxley 3
H. H. the Maharajah of Rajpipla's Tipster (8st.), Morris 4

Won by three-quarters of a length, a short head and two and a half lengths. Time—2 mins. 12 1-5 secs.

Viceroy's Cup. Distance 1¾ miles.—

Mr. Goculdass' Roubaix (9st. 3lbs.), Huxley 1
Mr. Sangidas Jesiram's Not Much (9st. 3lbs.), Riley 2
H. H. the Maharajah of Rajpipla's Charlie's Smile (9st.), Ritchie 3
Mr. Thaddeus' Unitoi (9st. 3lbs.), Ruiz.. 4

Won by a short head, one and three-quarter lengths and one and a quarter lengths. Time—2 mins 59 4-5 secs.

Cooch Behar Cup. Distance 1 mile 3 furlongs—

Mr. Low's St Nathey (7st. 8lbs.), Smith.. 1
Messrs. Evers and Eddi's Limton (7st 2lbs.), Dobie 2
H H the Maharani of Cooch Behar's Princess Ila (7st. 3lbs.), Ritchie.. .. 3
H. H the Maharajah of Rajpipla's Charlie's Smile (9st. 7lbs.), Rosey.. .. 4

Won by three lengths, one and three-quarter lengths and one and a quarter lengths. Time—2 mins 20 1-5 secs.

Bombay.

Byculla Club Cup Distance 1½ miles.—

Mr Galstaun's St. Quin (8st. 6lbs.), Barden 1
Mr. Galstaun's Simon's Choice (8st 3lbs.), Orrell .. .. } 2
Messrs. Skelton and Peachey's Aleli (8st 5lbs), Harrison .. .. .. }
Mr. Goculdass' Roubaix (9st. 9lbs.), Huxley 4

Won by one length, dead heat, and two lengths. Time—2 mins. 51 2-5 secs.

Grand Western Handicap. Distance 1 mile—

Mr Frank's Brendan (7st. 12lbs.), Morris 1
Mr. Galstaun's Starshot (8st 10lbs.), Orrell 2
Mr. G. E. D. Langley's Poignant (9st. 4lbs.), Barnett 3
Mr. Sangidas Jesiram's Not Much (9st 7lbs.), Stokes 4

Won by half a length, one length and three quarters of a length. Time—1 min 39 1-5 secs.

Mansfield Plate. Distance 6 furlongs.—

Mr Nadir F. Garda's Dorania (7st. 2lbs.), Townsend 1
Mr. Galstaun's Galway Gate (9st 6lbs.), Orrell 2
Mr. Langley's Poignant (9st. 4lbs.), Barnet 3
Mr R. R. S's Quarryman (9st 2lbs.), Lambert 4

Won by one and a quarter lengths, three-quarters of a length, and half a length. Time—1 min. 14 2-5 secs

Flying Plate. Distance 5 furlongs—

Mr. R. R. S.'s Quarryman (9st.), Brown.. 1
Mr. Galstaun's Galway Gate (9st. 4lbs.), Orrell 2
H. H. the Maharajah of Nawanagar's Western Wave (9st. 2lbs.), Ruiz 3
Messrs. A. S. Mooloobhoy and Pine's Cresset (8st. 11lb.), Harrison 4

Won by a head, one length and the same. Time—1min 2-5 secs.

Willingdon Plate. Distance 1¼ miles.—

Messrs. Skelton and Peachey's Aleli (8st. 8lbs.), Harrison 1
Mr. Galstaun's Simon's Choice (8st. 6lbs.), Orrell 2
Mr. Galstaun's St. Quin (8st. 11lbs.), Barden 3
Mr Frank's Brendan (8st. 11lb.), Morris.. 4

Won by half a length, the same and three lengths. Time—2 mins. 6 3-5 secs.

Colaba Cup Distance 1 mile.—

Mr A. J. De Souza's Violinist (8st. 12lbs.), Higgins 1
Mr. N Begmahomed's Pourboire (7st. 10lbs.), Morris 2
Mr. Goculdass' Tagamour (7st. 9lbs.), Harrison 3
Mr. Hillman's Quite Dark (8st.), Flynn .. 4

Won by three-quarters of a length, a short neck and half a length. Time—1 min 39 3-5 secs.

Bombay City Plate. Distance 1¼ miles.—

Mr. Galstaun's Starshot (7st. 9lbs.), Orrell 1
Mr. M. Goculdass' Roubaix (9st. 7lbs.), Huxley 2
Mr. Galstaun's Crenides (8st.), Rose.. .. 3
Mr Kelso's Plaxtol (7st. 7lbs.), Lambert.. 4

Won by one length, one and a half lengths and two lengths. Time—2 mins. 5 secs.

Melbourne Plate. Distance 7 furlongs and 65 yards—

Mr Sangidas Jesiram's Not Much (8st. 9lbs.), Stokes 1
Mr. Goculdass' Verge (9st.), Huxley .. 2
Mr. R. R. S.'s Quarryman (9st. 4lbs.), Brown 3
Messrs. Skelton and Peachey's Aleli (8st. 10lbs.), Harrison 4

Won by two lengths, a neck and the same. Time—1 min. 29 1-5 secs.

Innovation Plate. Distance 6 furlongs.—

Mr. R. R. S.'s Waynflete (7st. 4lbs.), Townsend 1
Mr. R R. S.'s Quarryman (9st. 3lbs.), Brown 2
Mr. Goculdass' Verge (9st. 11b.), Huxley. 3
Mr. Thaddeus' Goldgainer (8st. 9lbs.), Ruiz. 4

Won by a short neck, one and a half lengths and half a length. Time—1 min. 15 2-5 secs.

Turf Club Cup. Distance 1¼ miles—

Mr. Goculdass' Rose Hill (7st. 10lbs.), Herbert 1
H. H. the Maharajah of Rajpipla's Tipperary (8st 11b.), Morris 2
Mr. Heath's Dilawar (7st. 13lbs.), Donnelly 3
Mr. A. E. Stephen's Huntsman (7st. 3lbs.), Meekings 4

Won by a quarter of a length, a short head and half a length Time—2 mins. 51 2-5 secs.

Bombay Derby. Distance 1½ miles.—

Mr. Heath's Dilawar (7st. 8lbs.), Donnelly. 1
Mr. Goculdass' Trade Mark (7st. 4lbs), Meekings 2
Mr. Felice's Kitchener (7st. 8lbs.), Lambert. 3
Mr Goculdass' Waabil (6st 11lbs), Bona.. 4

Won by three-quarters of a length, one length and a short head. Time 2 mins. 53 3-5 secs.

Malabar Hill Plate. Distance 6 furlongs 41 yards—

Mr. Galstaun's Galway Gate (7st 2lbs), Rose 1
Mr. Goculdass' Roubaix (9st), Huxley .. 2
H.H. the Maharajah of Nawanagar's Western Wave (8st. 8lbs), Townsend 3

Won by six lengths and ten lengths Time—1 min. 13 1-5 secs.

Rajpipla Gold Cup. Distance 1 mile.—

Mr. Goculdass' Roubaix (9st.12lbs), Huxley) Mr. Langley's Poignant (9st 4lbs.), Barnett) 1
H. H. the Maharajah of Nawanagar's Western Wave (9st 4lbs), Bowley .. 3
Mr. Hastings' Love Glass (7st. 8lbs) Bullock 4

Won by three-quarters of a length and the same Time—1 min. 39 1-5 secs.

Royal Connaught Cup. Distance 1½ miles.—

H. H. the Maharajah of Kolhapur's Dartmoor (9st. 5lbs), Brown.. 1
Mr. Heath's Dilawar (8st), Donnelly .. 2
H. H. the Maharajah of Rajpipla's Tipperary (8st. 2lbs.), Morris 3
Mr. Dawoodbhoy Nensey's Cessation (8st. 11lbs), Bowley 4

Won by two lengths, half a length and the same. Time—2 mins. 20 secs.

Poona.

Poona Country Bred Derby. Distance 7 furlongs—

Mr. Heath's Steel Blue (9st. 12lbs), McPherson 1
Mr. Heath's Jovial (7st. 12lbs.), Donnelly.. 2
H. H. the Maharajah of Mysore's Come On (9st.), Easton 3
H. H. the Maharajah of Mysore's Black Top (9st.), Mitchell 4

Won by one and three-quarter lengths, three-quarters of a length and the same. Time—1 min. 34 1-5 secs.

Poona Arab Derby. Distance 1½ miles.—

Mr. Noble's Brindisi (8st. 8lbs.), Wood .. 1
Yuvaraja of Kolhapur's Kusra (8st. 12lbs.), Townsend 2
Mr. Mahmood Shirazee's Shums (8st. 3lbs.), Morris .. .. } 3
Mr. Goculdass' Wabil (7st. 9lbs.), Purtoosingh .. .. .. }

Won by half a length, three-quarters of a length, dead heat. Time 2 mins. 53 4-5 secs.

Trial Plate. Distance 1 mile—

Mr. Sangidas Jesiram's Not Much (9st.), Riley.. 1
Mr. R R S's. Quarryman (9st. 2lbs.), Townsend 2
Mr. Langley's Poignant (9st 2lbs.), Barnett. 3
Mr Goculdass' Verge (8st. 7lbs), Walker . 4

Won by one length, three and a half lengths, and half a length. Time—1 min. 42 3-5 secs

Aga Khan's Cup Distance 1½ miles.—

Mr. Sangidas Jesiram's Not Much (9st. 7lbs.), Riley 1
Mr. Thaddeus' Misri Lal (8st. 7lbs.), J. G. Meekings 2
Mr. Kelso's Plaxtol (8st. 7lbs.), McPherson.. 3
Mr. Goculdass' William the Beau (9st. 2lbs.), Huxley 4

Won by a short head, one length and half a length. Time—2 mins. 37 4-5 secs.

Ganeshkhind Plate. Distance 6 furlongs.—

Messrs Langley and Geddis' Vallance (7st. 6 lbs.). Herbert 1
Mr R. R. S.'s Quarryman (9st.), Lambert.. 2
Mr. Goculdass' Verge (8st. 5lbs), Harrison 3
H. H the Maharajah of Nawanagar's Western Wave (9st) 4

Won by one length, three-quarters of a length and the same. Time—1 min. 13 secs.

Poona Country Bred St Leger. Distance 1½ miles.—

Mr. Heath's Steel Blue (10st. 1lb.), McPherson 1
Mr. Pine's Come On (9st.), Bowley.. .. 2
Mr. Heath's Jovial (7st. 11lbs.), Lambert 3
Genl. Raja Sir Hari Singh's Criadillo (8st. 11lbs.), Donnelly 4

Won by two lengths, two and a half lengths and three-quarters of a length. Time—2 mins. 15 4-5 secs.

Governor's Cup. Distance round the Course.—

Mr. Heath's Dilawar (8st. 5lbs), McPherson 1
Uvaraja of Kolhapur's Kusra (7st. 5lbs), Lambert 2
H. H. the Maharajah of Rajpipla's Tipperary (8st. 13lbs), Morris 3
Mr Sayed Rashid's Desert Flower (7st. 7lbs), Ritchie 4

Won by three-quarters of a length, half a length and a short head. Time—3 mins. 6 3-5 secs.

Turf Club Cup. Distance 1½ miles.—

Uvaraja of Kolhapur's Kusra (7st. 7lbs.). Lambert 1
Mr. M. Shaffy's Golshan (7st. 3lbs.), Townsend 2
Mr. Heath's Dilawar (8st. 9lbs.), McPherson 3
H. H. the Maharajah of Rajpipla's Tipperary (8st. 13lbs.), Morris 4

Won by three-quarters of a length, one length and half a length. Time—2 mins. 51 1-5 secs.

Western India Derby Stakes. Distance 1¼ miles —

Mr. Goculdass' The Count (8st. 11lbs.), A. C. Walker 1

Mr. Gold's Quiver (8st. 5lbs.), Harrison 2

Mr Goculdass' Night Bomber (8st 8lbs.), Purtoosingh 3

Mr Langley's Sweet Adare (8st 8lbs.) Barnett 4

Won by a neck, another neck and a head Time—2 mins 10 1-5 secs

Western India Stakes Distance 1¼ miles —

Mr. Frank's Brendan (8st. 6lbs.), Morris 1

Messrs. Skelton and Peachey's Aleli (8st 11lbs.), Harrison . . 2

Mr. Sangidas Jesiram's Not Much (9st 6lbs.), Riley . 3

Mr Langley's Poignant (9st 4lbs.) Barnett 4

Won by a short head, a head and half a length Time—2 mins 8 2-5 secs

Aga Shamshudim Plate Distance 1 mile —

Mr Frank's Brendan (8st 10lbs.), Morris 1

Mr. Goculdass' Verge (8st 8lbs.), Huxley 2

Mr Langley's Poignant (9st 5lbs.), Barnett 3

H H the Maharajah of Nawanagar's Bruce Lodge (8st 5lbs.), Bowley . . 4

Won by three-quarters of a length, the same and half a length. Time—1 min 43 secs.

St Leger Plate Distance round Course and distance —

Messrs Skelton's and Peachey's Aleli (8st 13lbs.), Harrison . 1

Mr. Frank's Brendan (8st. 11lbs.), Morris 2

Mr Thaddeus' First First (9st.), Barnett 3

Mr. Goculdass' Mordennis (8st 7lbs.), Huxley 4

Won by three lengths, one and a quarter lengths and one length Time—2 mins. 50 1-5 secs.

King Edward Memorial Plate. Distance 1 mile.—

Mr Heath's Marcodia (8st 3lbs.), A. C. Walker 1

Mr P. C. Singhance's Mist (8st 6lbs.), Townsend 2

Mrs J. L. Ainsworth's Verna (7st. 12lbs.), Herbert 3

Mr. R. H. Gahagan's Cally (9st 10lbs.), Donnelly 4

Won by one and a half lengths, one length and one and a quarter lengths. Time—1 min. 44 secs.

Prince of Wales Steeplechase. Distance 2¾ miles.—

Mr Heath's O. C. Honeymoon (11st.), Major Warden 1

Lt.-Colonel G. Moore's Daroji II (10st. 9lbs.), Owner 2

Captain D. H. M. Carbery's Avro (12st. 8lbs.), Owner 3

Lt.-Col. Gill and Capt. Rayneau's Centre (10st.), McPherson 4

Won by a distance, one and a half lengths and a distance. Time—6 mins. 10 2-5 secs

Prince of Wales' Cup Distance 1½ miles.—

Mr S R A Wahab's Lammgton (7st. 4lbs.), Townsend 1

Mr Heath's Dilawar (8st. 11lbs.), McPherson 2

Yuvaraja of Kolhapore's Kusra (8st 4lbs.), Bullock . . . . . } 3
Mr Goculdass' Tyrant (7st 11lbs.) Walker }

Won by half a length, the same and a dead heat Time—2mins 53 secs.

Lucknow.

Great Oudh Handicap Distance 6 furlongs —

Mr Ahmed Hazamy's Escort (8st 11lb.), Northmore 1

Raja Sripal Singh's Lightening (8st 8lbs.), Mason 2

Mr S Bashu Ali's Carlisle (7st 11lbs.), O'Brien 3

Mr. A. Basvaraj Urs' Arab Knight (9st 11lbs.), J Flynn 4

Won by two lengths, half length and one length. Time—1 min. 3 secs.

Governors' Cup Distance 1¼ miles —

Mr A M Fawcett's Traceable (9st.), Pullin 1

Mr Aliba's Idyll (8st 11lbs.), J. E. L Harrison 2

Mr S Bashir Ali's Double Win (8st 5lbs.), O'Brien 3

Raja Sripal Singh's Talcum (9st 4lbs.), Ruiz 4

Won by a short head, the same and three-quarters of a length Time —1 min 43 secs.

Murray Cup Distance 1 mile —

Mr Mirza Mahomed Hosain's Witch Doctor (8st. 8lbs.), Mujeed 1

Mr Thomas' Silver Gift (9st 2lbs.), Pullin 2

Mr. Grant's Capricorn (7st.), M. Hoyt . 3

Mr B. N. Bhargava's White Poppy (9st 5lbs.), Trahan 4

Won by a short neck, two lengths and a neck. Time—1 min. 43 3-5 secs.

Army Cup Distance 7 furlongs.—

Captain C B. Jackson's Senstord (11st. 9lbs.), Capt Barker 1

Messrs. Deane Freeman and Fawcett's Repartee (11st. 7lbs.), Mr Fawcett.. 2

Captain Ward and Mr. Ferguson's Garden Reach (10st. 8lbs.), Mr. Ferguson .. 3

Major N. A. H. Campbell's Smiling Morn (9st 12lbs.), Owner 4

Won by a short head, ahead and one length. Time—1 min. 32 secs.

Lucknow Grand National. Distance 2½ miles.—

Mr. Ivan Jones' China Egg (12st. 2lbs.), Mr. Stewart 1

Mr. C. N. Douetil's Henriette (9st. 5lbs.), Meades 2

Captain Wallington's What Next (9st 8lbs.), Capt. Newill 3

Won by eight lengths and three lengths. Time—5 mins. 16 1-5 secs.

Civil Service Cup Distance 6 furlongs.—

Mr. T. Swan's Fleurette (9st. 3lbs.), Northmore 1

Mr. Galstaun's Green Pearl (....), Ruiz 2

Nawabzada S. N. Meerza'a May Morn (9st. 3lbs.), Pullin 3

Won by half a length and a neck. Time—1 min. 18 secs.

Taluqdar's Cup. Distance 1¼ miles.—

Mr. Pine's Mountain Apple (8st. 7lbs), Harrison 1

Mr. Essajee's Steel Blue (9st. 5lbs), J. Flynn 2

Mr. Pine's Sugar Cane (9st. 4lbs.), Ruiz .. 3

Genl. Raja Sir Hari Singh's Belgraven (7st. 5lbs.), Mason 4

Won by a neck, two lengths and two and a half lengths. Time—2 mins. 44 secs.

Windsor Cup. Distance 7 furlongs.—

Major N. A. H. Campbell's Smiling Morn (10st. 4lbs), H. R. H. the Prince of Wales. 1

Major G. Conder's Middleton (9st. 10lbs.), Capt. Barker 2

Mr. Grant's Capricorn (9st. 8lbs.), Mr. Jackson 3

Won by half a length and one and a half lengths. Time—1 min. 19 secs.

Jehangirabad Cup. Distance 5 furlongs.—

Mr. Galstaun's Green Pearl (9st. 7lbs.), Ruiz 1

Mr. E. D. Raymond's Phyllis (8st. 12lbs.), Higgins 2

The Rajkot of Kaikunthapur's Elsie R. (9st. 7lbs.), Harrison 3

Mr. Mark's Careless Girl (9st. 7lbs), Trahan. 4

Won by a length, a short head and three-quarters of a length. Time—1 min. 6½ secs.

Patiala Cup. Distance 1 mile.—

Mr. Fawcett's Traceable (9st. 8lbs.), Pullin. } 1
Mr. Aliba's Idyll (8st. 13lbs.), Harrison.. }

Raja Sripal Singh's Talcum (9st. 2lbs.), Mason 3

Won by three-quarters of a length. Time—1 min. 45 secs.

Prag Narain Bhargava Cup. Distance 1 mile.—

H. H. the Maharajah of Patiala's Red Duke (10st, 9 lbs.), Northmore 1

Raja Sripal Singh and Kunwar Rajendra Singh's Bally Apple (8st. 7lbs.), Delis .. 2

Capt. Round's Priscilla (7st.), Brownlee .. 3

H. H. the Maharajah of Mysore's Maple (10st. 3lbs), Mitchell 4

Won by a short head, one length and three-quarters of a length. Time—1 min. 46 2-5 secs.

Gwalior.

Gwalior Cup Distance 7 furlongs.—

Mr. Hasting's Gunda (7st. 12lbs.), Bullock 1

Mr. Bashir Ali's Double Win (8st. 10lbs.), Harrison 2

Mr Begmahomed's Mim (7st. 3lbs), M Hoyt 3

Mr. Peachey's Balira (9st.), J. Flynn .. 4

Won by three-quarters of a length, half a length and one length. Time—1 min. 29 secs.

Scindia Cup. Distance 1¼ miles.—

Mr. Vernon's Fleurbaix (7st. 7lbs), Lambert 1

Mr. Goculdass' Catchup (8st 6lbs), Purtoosingh 2

Mr. Peachey's Cyanite (7st. 12lbs), Harrison 3

Mr. Galstaun's Golden Square (9st. 12lbs), Bloss 4

Won by a length, half a length and a neck. Time—1 min. 49 3-5 secs

Mathradas Goculdass Cup. Distance 6 furlongs.—

Messrs Hastings and Gutherie's Tit Bits (9st), Bullock 1

Mr. Nassim Sahib's Black Ivory (8st. 11lbs.), Donnelly 2

Mr. Goculdass' Royal Court (8st. 9lbs.), Harrison 3

Mr. Karbhari's Alladin (8st. 6lbs), Morris.. 4

Won by a short head, three-quarters of a length and a neck. Time—1 min. 23 2-5. secs.

Galstaun Cup. Distance 6 furlongs.—

Mr. Galstaun's No Ball (8st. 5lbs.), Morris . 1

Mr. Peachey's Balira (9st.), Flynn.. . 2

Mr. Ahmed Hazamy's Gladiator (8st. 3 lbs.), Bowley 3

Mr. Heath's She She (8st. 4lbs.), Donnelly.. 4

Won by one length, and a head. Time—1 min. 15 3-5 secs.

Sir Appaji Rao Sitole Cup. Distance 1 mile.—

H. H. the Maharajah of Patiala's Red Duke (10st. 2lbs.), Barden 1

Mr. Bashir Ali's Black Friar (8st. 5lbs.), Morris 2

Lt.-Colonel Ikbalmahomed Khan's Sweet Apple (8st. 1lb.), Flynn 3

Messrs. Hastings and Gutherie's Toddy (7st. 9lbs.), Bullock 4

Won by half a length, the same and two and a half lengths. Time—1 min. 57 1-5 secs.

Meerut.

Meerut Silver Vase. Distance 7 furlongs.—

Mr. Barton's Taiseer (7st.), M. Hoyt .. 1
Mr. Nethersole's Logic (7st. 11b.), Mitchell. 2
Captains Holt and Ward's Axis (8st. 11lbs.), Alford 3
Mr. Mullick's Antonio (7st. 9lbs), Japheth. 4
Won by a neck, one length and a neck. Time—1 min. 35 4-5 secs.

Meerut Gold Cup. Distance 6 furlongs—

H. H. the Maharajah of Patiala's Ballincurra (11st. 7lbs), Harrison 1
Thakur Chandrika Prasad's Kishoree (7st. 8lbs), Japheth 2
Raja Sitpal Singh's Indian Made (7st), Bona 3
Won by a short head and five lengths. Time—1 min. 16 2-5 secs.

Jodhpur Cup. Distance 2 miles.—

Mr Crawther's Lady Disdain (10st. 10lbs), Mr. Steer 1
Captain Wallington's Bohunk (11st. 10lbs), Thompson 2
Lt.-Colonel Gill and Captain Ravneau's Susie (10st 10lbs), Captain Martin 3
Won by ten lengths and the same Time—4 mins. 24 secs.

Meerut Military Cup. Distance 1½ miles.—

Mr. Grant's Capricorn (9st. 7lbs), Captain Martin 1
Captain Ward and Mr Ferguson's Garden Reach (11st. 13lbs.), Mr. Ferguson .. 2
Major Campbell's Smiling Morn (11st. 4lbs), Owner 3
Mr. McCulsh's The Poacher (10st. 5lbs.), Owner 4
Won by three lengths and four lengths. Time—2 mins. 44 secs.

Lieutenant-Governor's Cup Distance 2 miles.—

Messrs. Byass and Sheppard's Reigning Star (12st. 3lbs.), Mr. Byass 1
Mr. Deane Freeman's Gorgeous George (10st. 10lbs.), Mr. Fawcett 2
Lt.-Colonel Moore's Daroji II (10st.), Captain Newill 3
Major Cameron's Glengarry (10st. 11lbs.), Major McCudden 4
Won by forty-two lengths and forty lengths. Time—4 mins. 34 2-5 secs.

Governor-General's Cup. Distance 1¼ miles.—

Genl. Raja Sir Hari Singh's Belgraven (8st. 6lbs.), Beasley 1
Messrs. V. J. Reid and W. King's To-day (9st. 9lbs.), Trahan 2
Thakur Maheswari Prasad's Savant (9st. 4lbs.), Abdul Wahid 3
Mr. A. W. Essa's Dauchty (8st. 3lbs.), Mujeed 4
Won by two and a half lengths, the same and one and a half lengths. Time—2 mins. 17 1-5 secs.

Tikra Cup. Distance 6 furlongs.—

Messrs. Hadiapikhan and Syed Osman Qadar's Rangoon (7st 13lbs.), Alford .. 1
Captain Forth's Powder Puff (9st. 8lbs), Fozard 2
Captain Hodgin's Nadim (8st.5lbs.), Beasley 3
Mr. Ibrahim Moosar's Spark (8st. 11lbs.), Ethal 1
Won by one and a quarter lengths, two and a half lengths and a head. Time—1 min. 16 4-5 secs.

Madras.

Venkatigiri Cup. Distance 1 mile.—

Yuvaraja of Kolhapur's Anaiza (10st 10lbs), Brown 1
Mr. J. Cromwell's Reuter (9st. 3lbs), White 2
Mr. Goculdass' Rashid (8st 11b.), Meekings 3
Won by one length and a neck. Time—1 min. 54 1-5 secs.

I. C. S Cup. Distance 5 furlongs—

Messrs. Cherry and Heaton's Wee Dole (9st.), R. Grace 1
Lt. the Raja of Venkatigiri's Orme D'or (9st.), O'Shaunessy 2
H. H. the Maharajah of Mysore's Armistice (9st 3lbs), Babujan 3
Won by ten lengths and a hort head. Time—1 min .33 1-5 secs.

I M S. Cup. Distance 5 furlongs.—

Mr. R R S.'s Ilione (8st. 11lbs.), Brown . 1
H. H. the Maharajah of Mysore's Little Spec (8st.), Babujan 2
H. H. the Maharajah of Mysore's Berinthia (8st. 10lbs), Mitchell 3
Won by two and a half lengths and three-quarters of a length. Time—1 min. 5 secs.

Lady Willingdon Plate. Distance 1 mile.—

Yuvaraja of Kolhapur's Anaiza (10st. 3lbs.), Brown 1
Mr. Goculdass' Marauder (8st 5lbs.), Meekings 2
Mr. J. H. Nicholl's Mitigation (8st. 13lbs.), E. S. Grace 3
Won by three-quarters of a length and the same. Time—1 min. 52 4-5 secs.

Governor's Cup. Distance 1½ miles—

Mr. R. R S.'s Archer (10st. 4lbs.), Brown.. 1
H. H. the Maharajah of Mysore's Ben Gill (8st. 6lbs), Quinn 2
Mr. Goculdass' Two Gates (8st. 3lbs.), Meekings 3
Won by a short head and a head. Time—2 mins. 44 3-5 secs.

Admiral's Cup. Distance 1 mile 1 furlong—

Mr. Ali Asher's Keynote (8st. 8lbs), Quinn. 1
Mr. Borajannah's Moonlight (9st), Babujan 2
Mr. H. R. Dunks' Nawabzada (9st. 3lbs), Mitchell 3
Won by one length and five lengths. Time—2 mins. 3 secs.

Duke of Connaught's Stakes. Distance 1 mile.—

Mr. R. R. S.s. Jewel (9st. 12lbs.), Brown .. 1

H. H. the Maharajah of Mysore's Cerago (10st. 4lbs.), Quinn 2

Messrs. Cherry and Heaton's Wee Dote (8st. 9lbs.). R. Grace 3

Won by one length and half a length. Time—1 min. 23 2-5 secs.

Bobbili Cup. Distance 1¼ miles—

Mr. Newman Sander's Way of an Eagle (8st. 13lbs.), Brown 1

H. H. the Maharajah of Mysore's Max (8st 11b.), Quinn 2

Mr. Mesmaranah's Kapri (9st. 12lbs.), White 3

Won by one and a half lengths and two lengths Time—2 mins. 28 3-5 secs.

Mysore Cup. Distance 6 furlongs.—

Mr. S. C. Berridge's Helencourt (9st. 5lbs.), Quinn 1

H H. the Maharajah of Mysore's Sibell de Langton (8st 5lbs.). Bona . .. 2

Mr. Newman Sander's Way of an Eagle (7st. 7lbs.), White 3

Won by one and a quarter lengths and a head. Time—1 min. 20 secs.

Travancore Cup. Distance 6 furlongs—

Mr. J. Cromwell's Reuter (9st. 3lbs.), Quinn 1

Mr. Basavarajur's Arab Knight (9st 3lbs.), Bland 2

Mr. Goculdass' Magic (9st 3lbs.). Meekings 3

Mr. K. B Haji Ismail Sail's Look Out (9st. 3lbs.), Bona 4

Won by three-quarters of a length, half a length and one and a half. Time—1 min. 2; 4-5 secs.

Merton Cup. Distance 1½ miles —

H. H. the Maharajah of Mysore's Jawonette (7st. 11lbs.), Bona 1

Mr. Newman Sander's Way of an Eagl (8st. 3lbs.), Quinn 2

Mr. Goculdass' Matchlock (9st 12lbs.), Meekings 3

Won by three and a half lengths and one and a half. Time - 2 mins 38 sec .

Cochin Cup. Distance 6 furlongs.—

H. H. the Maharajah of Mysore's Jajponette (8st 9lbs.), Bona.. 1

H. H. the Maharajah of Mysore's Sandra (8st. 11lbs.), Babboo 2

Messrs. Cherry and Heaton's Wee Dote (8st. 11lbs.), Bland 3

Won by two and a half lengths and one and a half lengths. Time—1 min. 15 2-5 secs.

Lahore.

Governor's Cup. Distance 1 mile.—

Mr. Cornforth's Ginger Mick (8st. 11lbs.), Owner 1

Mr. Turner's Perception (9st.) Japheth .. 2

Mrs. Orde's Sea Trip (8st.) Bhikka.. .. 3

Sardar Jewan Singh's Hameth Boy 7st. 7lbs.), Jones 4

Won by a head, one length and a head. Time—1 min 36 4-5 secs.

Mamdot Cup. Distance Round Course.—

Mr. Faizul Hosain's Ayala (7st 10lbs.), Meades 1

Lt.-Col. Kettlewell's Karun (8st. 13lbs.), Alford 2

Lt.-Col Cook Young's National (8st. 11lbs.). Quinn 3

Mr Hashmy's Bolt Away (8st. 10lbs.), Jones 4

Won by a length and the same Time—3 mins 24 2-5 secs.

Lahore Cæsarewitch. Distance Round Course —

Mr Pearcey's Nice Bird (9st. 7lbs.), Buckley 1

Captain Kerr's Balline (11st.). Quinn .. 2

Mr. Riazul Hosain's La Farine (7st. 13lbs.) Meades 3

Captain Farrar's The Poacher (8st. 3lbs.), Major Guild 4

Won by two and a half lenghts, half a length and five lengths. Time—3 mins. 9 4-5 secs.

Convillepur Cup. Distance 1 mile —

Captain Randall's Isolda (9st. 1lb.), Buckley 1

Raja Sripal Singh's Indian Made (10st 11b.), Abdul Wahid 2

Major Whitaker's Wood Nymph (10st. 8lb.), Quinn 3

Lt Mahomed Khan's Macfly (7st. 8lbs.), Jones 4

Won by half a length, the same and a head. Time—1 min 48 4-5 secs.

Punjab Cup. Distance Round Course —

Mr. Cornforth's Ginger Mick (8st. 10lbs.), Owner 1

Mr. Turner's Perception (8st. 10lbs.),Japheth 2

Col Commandant Ranken's Zabardust (10st. 3lbs.), Captain Broad foot 3

Major Vanrenen's Generous (8st. 11lbs.), Quinn 4

Won by half a length, six lengths and three lengths. Time—3 mins. 14 1-5 secs.

Merchants Cup. Distance 6 furlongs. -

Mr. Chandrika Prasad's Kishoree (10st. 6lbs.), Abdul Wahid 1

Captain Randall's Cerise (8st. 10lbs.), Quinn 2

Captain Hodgins' Wangy (8st. 8lbs.), Meades 3

Sardar Jewan Singh's Mavourneen (8st. 10lbs.), Adbul Khaliq .. .. ..

Won by a head, ten and a half lengths and a head. Time—1 min, 18 2-5 secs.

Woodward Cup. Distance 1 mile.—

Captain Lewis' Grey Sprite (10st 10lbs), Buckley 1
Mr. Vernon's Vernon (8st. 7lbs.), Jones.. 2
Mr. Ahmed Hosain's Garland (9st. 11b). Thompson 3
Won by two and a half lengths and half a length. Time—1 min. 55 secs.

Lahore Grand National. Distance 2¼ miles.—

Captain Wallington's Bohunk (10st. 12lbs). Capt Randall 1
Major Gibbs' Mike (10st), Captain Harries 2
Major Burridge's May Gift (9st. 12lbs), Capt. Peppe.. 3
Won by six lengths and half a length Time—5 mins 22 2-5 secs.

Patiala Cup Distance 5 furlongs.—

Captain Randall's Cerise (8st. 5lbs), Buckley 1
Thakur Chandrika Prasad's Kishoree (10st 4lbs), Abdul Wahid 2
Captain Hodgins' Wangy (7st. 9lbs), Meades 3
Sardar Jewan Singh's Mavourneen (8st. 9lbs.), Jones 4
Won by half a length, a length and the same. Time—1 min 4 1-2 secs.

Rawalpindi.

Punjab Army Cup. Distance 2½ miles.—

Captain W. M. Neville's Bohunk (10st 10lbs.), Major McCudden 1
Captain R. J P. Jones' Gallop In (9st. 13lbs.), Capt. Broadfoot 2
Mr. Freeman's Gorgeous George (10st. 10lbs), Mr. Fawcett 3
Won by two lengths and twenty lengths. Time—5 mins. 7 2-5 secs.

Northern Cup Distance 1½ miles.—

Genl. Raja Sir Hari Singh's Glencoe (11st. 5lbs.), Trahan 1
Captain J. A. Ward's Axis (8st. 9lbs), Capt. Alexander and Major Weston's Turk (7st.) Brownlee .. .. .. } 2
Mr A. M. Fawcett's Winkle (7st. 4lbs.), Mosomdin 3
Won by three-quarters of a length, dead heat and four lengths. Time—3 mins. 1 4-5 secs.

Rawalpindi Gold Cup. Distance 1 mile 1 furlong.—

Captain C. O. Forth's Lady Lyric (9st. 2lbs.), Quinn 1
Colonel Desraj Urs' Miss Twistum (9st. 12lbs.), Mitchell 2
Colonel Desraj Urs' Munderah (9st. 10lbs.), Trahan 3
Thakur Maheswar Prasad's Savant (8st 2lbs), Adbul Wahid ..
Won by six lengths, a head and one and a half lengths Time—2 mins. 3-4 secs.

Turf Club Cup. Distance 7 furlongs.—

Genl Raja Sir Hari Singh's Lover True (10st. 5lbs.), Trahan 1
Mr Roscoe's Simon's Gift II (8st. 7lbs), Captain Barnard . . . 2
H H. the Maharajah of Patiala's L'Avenir (7st), Brownlee . . 3
Captain Sandford's Luana (8st. 3lbs) Quinn 4
Won by two lengths, two and a quarter lengths and eight lenghts. Time—1min 32 secs

Autumn Cup. Distance 7 furlongs.—

Mr Holday's Mooi (10st 10lbs), Alford ..
Squad. Ldr. Barton's Genuine (7st). Japheth 2
Mr. Sydney Smith's Copper Queen (7st.), Din 3
Captain Plunkett's Bushwhacker (7st). Bhikka . . 4
Won by three lengths and two lengths. Time—1 min 35 2-5 secs.

Kashmir Cup. Distance 2 miles 1 furlong.—

Mr. Pearcey's Nice Bird (9st. 10lbs.). Capt. McMullen 1
Mr. Deane Freeman's Rheidol (11st. 1lb). Mr. Fawcett 2
Captain Farraut's Empty Title (9st.). Major Guild 3
Captain Kerr's Balline (11st 3lbs), Mr. Roberts 4
Won by half a length, one and a half lengths and three-quarters of a length. Time—2 mins 3 4-5 secs.

Barrackpore.

The Duke's Cup. Distance 1 mile.—

H. H. the Maharajah of Cooch Behar's Flying Dart (8st. 9lbs.), Fezard.. .. 1
Mr. Soutar's White Sapphire (9st. 3lbs). Walker 2
Mr. Mullick's Verland Rose (8st. 7lbs), Dobie 3
Won by a head and one length. Time—1 min. 44 1-5 secs.

Newmarket Cup. Distance 1 mile.—

Mr. Huque's Jolly Friar (9st. 8lbs.), Reynolds 1
Mr. Huque's Torchlight (10st. 12lbs). Higgins 2
Mr. Edward's Wolfkin (7st. 7lbs.), Mackings 3
Mr. Wilson's Ethelwill (8st. 9lbs), Harrison 4
Won by three-quarters of a length and three inches Time—1 min. 46 secs.

BOXING.

Southern Command Championship Tournament.

Bantam Weights.—Pte. Berrill, 2nd Beds. and Herts.

Middle Weights.—Rifleman Lea, 3rd K. R. R.

Feather Weights.—Rifleman Honeywood, 3rd K. R. R.

Light Heavy Weights.—Pte. Lorcett, 1st Green Howards.

Light Weights.—Sertg. Page, 26th Bde., R. F. A.

Fly Weights.—Bugler Hands, 3rd K. R. R.

Welter Weights.—Sergt. Maxey, 2nd Beds and Herts.

Heavy Weights.—Bdr. Pashe, 24th Bde., R. F A.

Winning Unit.—2nd Beds. and Herts

All-India Tournament, Mussoorie.—

Heavy Weights.—Pte. Wilson, 1st Camerons.

Light Heavy Weights.—Lce.-Bdr Pritchard, 22nd Bde., R. G. A.

Middle Weights.—Sergt. Anderson, 2nd Royal Irish Fusiliers.

Welter Weights.—Lce.-Cpl. Wilkinson, 3rd K. R R.

Light Weights.—Lce.-Cpl. Harrison, Black Watch.

Feather Weights.—Rifleman Dukes, 1st Rifle Brigade.

Bantam Weights.—Bdsm. Merritt I, 1st Black Watch.

Fly Weights.—Bdsm. Merritt II, 1st Black Watch.

Auxiliary Force All-India Tournament.—

Light Weights.—Gunner Ford, R. F. A.

Bantam Weights.—Pte. Lenon, 2nd B. B & C. I.

Welter Weights.—Pte. Smith, 1st G. I. P

Regular Army.

Light Weights.—Shoeing Smith Blake, 7th Hussars

Middle Weights.—Pte. Williams, 1st Worcesters.

Welter Weights.—Pte. Wills, 1st Worcesters.

TENNIS.

Poona Open Tournament—
Open Singles—Miller.
Open Doubles—Khare and Gore.
Hindu Doubles—Khare and Gore
Bengal Championships—
Men's Singles—Okamato
Ladies' Singles—Miss Swaine
Men's Doubles—Shimidzu and Okamato
Mixed Doubles—Mrs Donald and Shimidzu
Western India Championships—
Mixed Doubles—Mrs. Row and Wagle
Men's Singles—Bhagwat.
Men's Doubles—Wagle and Motarjee.
All-India Tournament, Allahabad—
Ladies' Singles—Mrs. Kemble.
Ladies' Doubles—Mrs Kemble and Mrs. Stronouch
Mixed Doubles—Mrs. Radford and Lahey Bean.
Men's Singles—Bobb.
Army Singles—Captain Barclay
Army Doubles—Major Copeland and Captam Barclay.
Handicap Singles—Mutterji.
Handicap Doubles—Chowdhary and Miroyn.
Delhi Tournament—
Ladies' Handicap Singles—Mrs. Harrison.
Men's Handicap Singles—Bishambar Dayal.
Men's Handicap Doubles—Bishambar Dayal and Devi Singh
Mixed Open Doubles—Mrs. Locke and Green
Men's Open Doubles—Jagat Mohanlal and Gupta
Men's Open Singles—Jagat Mohanlal
Conder Challenge Trophy, Bombay—
Harwood and Fugita
Simla Tournament—
Ladies' Singles—Mrs Walker
Mixed Doubles—Mrs Bostock and Crawford.
Men's Singles—Crawford.
Men's Doubles—Maharaj Singh and Green.
Quetta Club Open Tournament—
Ladies' Singles—Mrs Martin
Ladies' Doubles—Mrs Martin and Mrs. Farebrother
Mixed Doubles—Major Leith Ross and Mrs. Farebrother.
Men's Doubles—General Campbell and Captain Condon.
Sind Championships—
Mixed Doubles—Miss McBean and Captain Buzard.
Men's Singles—S. S. Shahani.
Men's Doubles—S. S. Shahani and Parsram Gharshan.

HOCKEY.

Aga Khan Tournament, Poona—
Poona United .. ..3 goals.
Argyll and Sutherland Highlanders .. *Nil.*
All-India Tournament, Allahabad—
North Western Railway .. ..2 goals
Jamalpur Detachment .. .. ..1 goal
Junior Aga Khan Tournament, Bombay—
B. E. S. School .. ..1 goal
St. Xavier's College .. .. .. *Nil.*
Richardson Challenge Cup, Poona—
3rd Sappers and Miners .. .. ..5 goals
14th Maharattas .. .. ..3 goals

Beighton Cup, Calcutta—
Sibpur .. ..2 goals
Rangers .. ..1 goal
Poona District Tournament, Poona—
Argyll and Sutherland Highlanders ..6 goals
Green Howards .. ..2 goals
Provincial Championship Touranment, Bangalore—
Baldwin Boys .. ..2 goals
20th Brigade, R. F. A. .. .. *Nil.*

FOOTBALL.

Murray Cup, Lucknow—
R. F. A. .. .. 2 goals
Devon Regiment .. .. .. *Nil.*
Old Contemptibles' Cup, Bangalore—
Queen's Bays 1st
145th Battery, R. G. A. .. . 2nd
Murree Brewery Cup, Murree—
Lancashire Fusiliers .. .. .1 goal
Cameronian Highlanders .. . *Nil.*
Poona District Tournament, Poona—
Durham Light Infantry .. ..1 goal
Argyll and Sutherland Highlanders .. *Nil.*
Challenge Shield Tournament, Calcutta—
The Worcester Regiment .. ..2 goals
Royal West Kent Regiment .. .. *Nil.*
Harwood League, Bombay—
King's Shropshire Light Infantry ..24 points
Bombay Gymkhana .. .. ..18 points
Rover's Tournament—
King's Shropshire Light Infantry . 1 goal
Argyll and Sutherland Highlanders .. *Nil.*
Durand Tournament, Simla—
3rd Worcestershire Regiment . . 1 goal
Royal Welsh Fusiliers .. .. *Nil.*

CRICKET.

Sind Quadrangular Tournament—
The Rest against The Hindus resulted in a drawn game.
C. P. Quadrangular Tournament—
Parsis beat the Hindus by an innings and 32 runs.

Bombay Quadrangular Tournament—
Presidency beat the Parsis by an innings and 297 runs

RUGBY.

Calcutta Rugby Cup—
Calcutta "A" .. .. 17 points
Gloster Regiment .. . .. *Nil.*
Bombay Gymkhana Cup—
Calcutta .. . .12 points
Northern India . .. .. 3 points

Madras Rugby Cup—
Ceylon won the cup, which was played for on the American system

ATHLETICS.

Deccan Gymkhana Meeting, Poona.

WRESTLING.

Amateur Champion: K. K. Maratha, Akalkot.

Graduate Champion: A. G. Dixit.

Poona College Champion: Naravane, Baroda College.

Champion and Winner of the Shield awarded by H. H. the Maharajah of Kolhapur: B. N. Chankwale, Satara.

DOUBLE BAR GYMNASTICS.

(1) S. V. Dange, Ujjain.

(2) M. M. Latkar, Sardars High School, Belgaum.

100 METERS FLAT RACE.

(1) S. V. Kail, Bombay.

(2) F. D. Gillett, Railway Gym., Lonavli.

110 METERS HURDLES.

(1) K. R. Rajadhyshshya, New Poona College.

(2) A. H. Khan, Govt. English School, Poona.

10,000 METERS RACE.

(1) M. C. Srinivas, Mysore.

(2) B. A. Khobanwar, Belgaum.

MARATHON RACE.

(1) M. R. Hinge, Aundh High School.

(2) N. K. Malhar, Telegaon.

RUNNING LONG JUMP.

(1) Maung Ba Yin, Agricultural College, Poona. Distance—17ft. 7½ in

RUNNING HIGH JUMP.

(1) V. R. Dixit, Sangli. Height—5 ft.

POLE JUMP.

(1) V. V. Powar, P. E. High School, Kolhapur. Height—8ft. 11in.

50 MILES CYCLING RACE.

(1) A. P. Dhobi, Poona

(2) S. S. Kaddi, Jamkhandi.

WEIGHT LIFTING.

(1) P. S. Wagle, Bombay.

(2) K. P. Chubb, R. P. C. and H. League, Bombay.

SWIMMING CHAMPIONSHIP.

(1) H. G. Keskar, Pandhapur.

(2) V. R. Dixit, Sangli.

ATYA-PATYA.

(1) Arya Kridodrearak Mandali, Poona.

(2) Poona Sportsmen.

KHO-KHO.

(1) S. S. A. Kho-Kho Team, Jamkhandi.

(2) Arya Kridodrearak Mandali.

B. P. A. S Meeting, Calcutta.

Amateur Championship.

100 Yards—W. R. Hildreth, Calcutta Harriers Time—10 3-5 secs.

220 Yards—W. R. Hildreth, Calcutta Harriers Time—23 1-5 secs.

120 Yards Hurdles—E. Creg-Williams, Calcutta Harriers and B. D. Chatterji, Mohun Bagan, dead heat.

440 Yards—T. K. Pitt, Calcutta Harriers. Time—51 2-5 secs.

Half Mile—B. D. Chatterji, Mohun Bagan Time—2 mins. 13 1-5 secs.

High Jump—F. K. Mitter, Ballygunge United Height—5ft. 8in.

British Army Championship.

100 Yards—Lt. J. S. Gorman, 51st Co., R. G. A. Time—11 secs.

440 Yards—Lt. Gorman. Time—52 2-5 secs.

655 Yards—Sergts. A. S. Brown, Black Watch Time—1 min. 21 secs.

1,000 Yards—Lce.-Cpl. J. Barry, Black Watch Time—2 mins. 28 4-5 secs.

One Mile—Lce.-Cpl. Barry. Time—4 mins. 53 secs.

Indian Army Championship.

100 Yards—Capt. P. J. W. McClenagan, 93rd Burma Infantry. Time—11 1-5 secs.

440 Yards—Capt. McClenagan. Time—53 3-5 secs.

Half Mile—Naik Amar Singh, 93rd Burma Infantry.

One Mile—Lce.-Naik Golap Khan, 1st-90th Punjabis. Time—4 mins. 52 2-5 secs.

All-India Amateur Meeting, Bombay.

100 Yards Handicap—Bdsm. Perkins, 2nd Beds. and Herts. Time—10 1-5 secs.

100 Yards Scratch—Lce.-Cpl. Roberts, 3rd K. R. R. Time—10 2-5 secs.

440 Yards—Sergt. Thompson, Ahmednagar. Time—56 secs.

Half Mile Relay—Beds. and Herts. Time—1 min. 41 2-5 secs.

Half Mile—Cpl. Sands, 3rd K. R. R. Time—2 mins. 10 1-5 secs.

One Mile—Rfn. Telgate, 3rd K. R. R. Time—4 mins. 58 1-5 secs.

120 Yards Hurdles—S. Lynn, C. H. School Old Boy. Time—18 3-5 secs.

220 Yards—Lce.-Cpl. Roberts, 3rd K. R. R. Time—24 secs.

440 Yards School Boys—J. Marchant, G. I. P. Ry. School. Time—60 secs.

Marathon Race (10 miles)—Rfn. Le Luyer, 3rd K. R. R. Time—57 mins. 5 3-5 secs.

2 Miles Cycle Race—M. Gerard, Colaba Time—7 mins. 19 3-5 secs.

Half Mile Cycle Race—G. D. Gerard, Y. M. C. A. Time—1 min. 29 4-5 secs.

High Jump—Bdr. Marsh, 59th Bty., R. F. A. Height—5ft. 4in.

Broad Jump—Bdsm. Perkins, 2nd Beds. and Herts. Length—19ft. 3in.

GOLF.

Amateur Championship of India—E. J. Anderson.

Macdonald Cup, Bombay—J. Cunningham.

St. George's Medal, Bombay—L. P. S. Bourne.

Golfer's Cup, Bombay—A. Rankin.

Blackheath Medal, Bombay—J. W. Jessop.

W. I. T. C. Cup, Poona—Major Thomas.

H. E. the Governor's Prize, Poona—Palmer.

Nasik Cup, Nasik—Lynch-Blosse.

Military Cup, Nasik—Wanostrocht.

Bombay Gymkhana Cup, Nasik—Francis.

Bombay Bangle, Nasik—Mrs. Bailey.

President's Cup, Nasik—Laurence.

Captain's Cup, Nasik—Fitzherbert.

Jessop Cup, Bombay—L. P. S. Bourne.

Challenge Shield and Gold Medal, Nasik—England.

Peace Day Cup, Nasik—Jenkins.

Calcutta Silver Medal, Bombay—J. W. Jessop.

Forty Two Medal, Bombay—N. Harley.

POLO.

Carmichael Cup, Calcutta—

H. E. the Governor of Bengal's Staff 6 goals
Calcutta "C" Team .. .. ..2 goals

Punjab Tournament, Lahore—

Patiala "A" Team . .. ..9 goals
23rd Cavalry .. ..5 goals

Venugopal Cup, Madras—

18th Hussars .. ..6 goals
34th Poona Horse .. .. ..5 goals

15th Hussars' Cup, Lucknow—

19th Hussars .. .. 9 goals
Cavalry School .. ..1 goal

Radha Mohan Tournament, Delhi—

Seaforth Highlanders "A" Team } Did
Seaforth Highlanders "B" Team } not play

Subsidiary Tournament—

Delhi Gymkhana .. .. ..5 goals
Meerut Gymkhana .. .. ..3 goals

Duke of Connaught's Tournament, Delhi—
Patiala .. ..7 goals
Jodhpur .. ..3 goals

Indian Cavalry Tournament, Delhi—
17th Cavalry .. . .9 goals
28th Light Cavalry .. . ..2 goals

Casenall Cup, Allahabad –
2nd Lancers "A" Team . . 7 goals
2nd Lancers "B" Team .. ..3 goals

Manda Cup, Allahabad—
31st Lancers .. .. . . 4 goals
Black Watch .. . 3 goals

Inter-Regimental Tournament –
17th Cavalry .. .. . 5 goals
21st Lancers .. . . 4 goals

Subaltern's Tournament —
21st Lancers .. . . . 6 goals
17th Cavalry . . 1 goal

Leader Cup, Rawalpindi
5th Lancers "A" Team 3 goals
26th Cavalry .. .2 goals

Viceroy's Staff Cup, Simla -
Snowdon . . 1st
Hodson's Horse . . . 2nd
American system of play adopted

Bangalore Tournament, Bangalore—
Sappers .. .. .6 goals
Queen's Bays .. .. .5 goals

Sir Pratap Cup, Poona—
Jodhpur 11goals
30th Cavalry,-34th Poona Horse . 3 goals

General Sir George Richardson's Cup, Poona—
33rd-34th Cavalry . . 5 goals
18th Hussars . .. ..3 goals

Meerut Autumn Cup, Meerut -
19th Royal Hussars . ..3 goals
Seaforth Highlanders .. ..2 goals

Subsidiary Tournament
Hodson's Horse . 4 goals
11th-12th Cavalry . . 5 goals

Royal Dragoon's Cup, Lucknow -
The Woodpeckers 4 goals
17th Cavalry "B" . . 3 goals

Prince of Wales' Commemoration Tournament, Bombay -
Rutlam .. . .5 goals
The Enthusiasts . 3 goals

Murree Brewery Cup, Rawalpindi -
26th Cavalry . . 6 goals
18th Royal Hussars 5 goals

Lahore X'mas Tournament, Lahore—
11th-12th Cavalry . . 5 goals
Hodson's Horse . ..4 goals

Subsidiary Tournament—
P A V.O Cavalry . . ..5 goals
The Odds . .. . ..1 goal

ROWING.

Poona Regatta—

Service Fours Challenge Cup -The Civil Team.

Junior Sculls—F. Nicholson.

Junior Pairs—T. Sewell and L. Dickinson coxed by Mr. E. P. Lloyd.

Mixed Doubles Sculls—Captain and Mrs. Large

Mixed Canadian Canoe Race—Miss Striedinger and Major Robertson

Sir George Lloyd's Challenge Cup for the Senior Sculls—T. J L. Thompson.

Oxenham Challenge Cup for Senior Pairs—I C. Boyd and P. M. Stewart.

Chronicle of the year 1921.

JANUARY.

1st.—The New Year's Honour List included the following knighthoods: Mr. Justice Shadi Lal, Lahore; Mr. Surendra Nath Bannerjea, Calcutta; Mr. G. K. Parekh, Bombay; Mr. M. de P. Webb, Karachi; Mr. A. R. Murray, Calcutta; Mirza Abdul Husain Sahib, Madras; Mr. M. B Dadabhoy, Nagpur; Mr. T Smith, Cawnpore; Rai Bahadur Hari Ram Goenka, Calcutta.—The National Congress concluded its session at Nagpur after passing resolutions relating to currency and finance and to boycott the Duke of Connaught's visit.—The Moslem League changed its creed to resemble that of the National Congress.—The National Liberal Federation concluded its session at Madras.—The All-India Social Conference was opened.

3rd. The amended conditions governing entrance to the Indian Civil Service announced. Age limit reduced and India recruitments to be a third, rising to a maximum of 48 per cent. in ten years—Personnel of the Governor of Bombay's Executive Council announced.—Reformed Bengal Government inaugurated

5th.—Indian Railway Committee resumes its sittings.—British Mission to Kabul crosses the Frontier.

7th.—President of the Council of State assumed office.—Marian Congress hall at Madras completely destroyed by fire.—Federation of Employers formed in Bombay.

8th.—Reformed Punjab Government inaugurated.

9th.—The Earl of Reading appointed Viceroy and Governor-General of India in succession to Lord Chelmsford.

10th.—His Royal Highness the Duke of Connaught arrived in Madras.—Anglo-Indian Conference opened at Nagpur.

12th.—New Madras Legislative Council inaugurated by H. R. H. the Duke of Connaught.—Strike of 3,000 employees of the Kohinoor Mills, Bombay.—Language changes for the I.C.S. examination published.

13th.—Official report of the serious disturbances at Rai Bareilly issued.

14th.—H. E. the Viceroy nominates members to the Council of State and Legislative Assembly.

17th.—Sir George Knox retires from the Allahabad High Court.—Officer's Association formed in India.—Reorganisation scheme for the Remount Service published.

19th.—Sir Charles Munro, formerly Commander-in-Chief in India, created a baronet.—Kohinoor Mill strike ends after a week.—Administration report on the working of Indian Railways for 1919-1920 issued.

20th.—Details published regarding the recruitment of Indian and Burman probationers to the Imperial Forest Service.

22nd.—New United Provinces Legislative Council opened.—First day of Motor Show at Colombo.

24th.—Second annual Conference of Associated Chambers of Commerce of India and Ceylon held in the Calcutta Exchange.—Annual meeting of the European Association held at Calcutta.—Blue Book published reviewing irrigation in India during 1918-1919.

27th.—M. Clemencau arrives in Bombay. Central Provincial Conference opened.—Madras strikes end after a protracted period.—Calcutta Tramway men go on strike.

28th.—Lieut.-General Sir Robert Baden Powell, the Chief Scout, arrives in Bombay with Lady Baden Powell.—H. R. H. the Duke of Connaught arrives in Calcutta.

29th.—The Duke of Connaught unveils the Victoria Memorial, Calcutta.—The Indian Audit Department formed.—The *London Gazette* announces the new rules for the nominations of candidates to the Indian Civil Service.

31st.—Bombay oil installations' employees go on strike.—Indian Science Congress opened at Calcutta by Lord Ronaldshay.

FEBRUARY.

1st.—H. R. H the Duke of Connaught opened the new Bengal Council.—Government of India decides to grant unemployment pay to officers remaining in the service unemployed.—Strike of weavers of the Century Mills, Bombay.—H. R. H. the Prince of Wales unveils a memorial to Indian troops at Brighton.

2nd.—The Duke of Connaught lays the foundation stone of the new King George's Docks at Calcutta.—Mr. Gandhi addresses a letter to the Duke regarding Non-co-operation.—Nomination of members to the Bombay Legislative Council announced.

3rd.—Her Royal Highness Princess Mary sends a message to the Girl Guides of India assuring them of her interest.—The Ahmedabad Municipality casts in its lot with the Non-co-operators by refusing the Government educational grant.

4th.—Policy of the Government of India towards the Draft Conventions and Recommendations adopted by the International Labour Conference at Washington described in two despatches from the Government of India to the Secretary of State, dated the 25th and 26th November 1920..

5th.—Century Mills strike ends

6th.—Mr. Gandhi opens the National College at Patna.

7th.—The Duke of Connaught arrives at Delhi.—Behar and Orissa Legislative Council inaugurated.

8th.—Chamber of Princes inaugurated by H. R. H. the Duke of Connaught.—Obituary—His Highness Mir Sir Imam Baksh Khan Talpur, G.C.I.E., Ruler of Khairpur State.

9th.—Inauguration of the Council of State and Legislative Assembly by His Royal Highness the Duke of Connaught at Delhi.

10th.—All-India War Memorial stone laid by the Duke of Connaught in New Delhi.—About 5,500 men of the Bombay, Baroda and Central India Railway workshops at Parel go on strike.—The men of the Oudh and Rohilkand Railway workshops at Lucknow also strike work.

11th.—Bombay postal strike ends after 114 days.—Annual meeting of the Mining and Geological Institute of India.—A Conference of Head-masters of European Schools opens at Jubbulpore and decides on the constitution of an Association.

12th.—The foundation stone of the new building to house the Indian Legislature was laid at New Delhi by the Duke of Connaught.

13th.—Men of the Great Indian Peninsula Railway workshops at Parel, numbering about 3,000, go on strike.

14th.—First business meeting of the Council of State at Delhi.

15th.—The Legislative Assembly holds its first business meeting at Delhi and discusses the Punjab disturbances.

16th.—The Duke of Connaught arrived at Rawalpindi.—The Government of India passes orders for the establishment of a local clearing house in India for enemy debts.

17th.—The Delhi Motor Show ends in a disastrous fire.—Great Military review by the Duke of Connaught at Rawalpindi.—The Central Advisory Board of Education at its first meeting discussed the expansion of education by compulsory means.

20th.—Serious affray at Nankana Sahib between Sikh Mahants and pilgrims, resulting in 200 casualties.

21st.—H. R. H. the Duke of Connaught arrives in Bombay.

22nd.—As a result of discussion between Government and the Members of the Indian Legislature it is decided to appoint a committee to visit Fiji to examine the Indian problem there.

23rd.—The Institution of Engineers (India) inaugurated at Calcutta by His Excellency the Viceroy.—Inauguration ceremony of the Bombay Legislative Council performed by the Duke of Connaught.—Calcutta Tramway strike settled after a period of 27 days.

24th.—The B. B. & C. I. Railway workshops strike ends.

25th. The Madras Tramway strike ends.

28th.—His Royal Highness the Duke of Connaught sails for England on board H. M. S. "Malaya."—Death of Sir Rash Behari Ghose at Calcutta.

29th.—Bengal train service badly dislocated as a result of a riot at Howrah station, Calcutta.

MARCH.

1st.—Revised rates of pay sanctioned for the members of the Political Department of the Government of India.—The Indian Budget for 1920-21 presented to the Legislative Assembly by the Finance Member with a prospective deficit of 18 crores. To overcome this it was proposed to increase the duty leviable on cotton manufactures, matches, liquor, articles of luxury, foreign sugar and tobacco; increase railway and postal rates, and make certain changes in income and super tax.—Judgment passed in the Delhi funeral boycott case, two accused being sentenced to imprisonment and two acquitted.

5th.—Burma Railway strike ends.

7th.—It was announced that British passports would entitle the holder to admission into any part of the British Empire.

8th.—Rates on foreign cablegrams to Europe increased from Rs. 1-2-0 to Rs. 1-4-0 per word.—The Government of Burma Bill introduced into the House of Lords.

10th.—Report of the Indian Jails Committee published.—An Indian Emergency Committee formed in England to conduct a campaign for drawing attention to the "dangerous situation in India."

11th.—President of the Divorce Court decides that divorces granted to Englishmen in India are invalid in England.

12th.—Sir Benjamin Robertson issues a statement on the position of Indians in South Africa and suggests the Westernization of the Asiatic to fit into his environment.—House of Commons agrees to the motion to appoint eleven members as a Joint Committee on Indian Affairs.—New Chelmsford Reform Club opened at Delhi by the Viceroy.—Strike of 7,000 men of the Burma Oil Company's Works at Syriam.

13th.—United Provinces Government announce the measures to be adopted to suppress the Kisan disorders in that province.

14th.—An announcement was made regarding the improvement of the conditions of service of the British officers, Indian officers, non-commissioned officers and men of the Indian Army.—The Government of India issues a summary of the terms offered to Turkey by the Allies.—Serious fire occurs at Rangoon

causing damage to the extent of one and a half lakhs of rupees and leaving 2,000 people homeless.—Recommendations of the South African Asiatic Enquiry Committee published, laying down the principle that there should be no compulsory segregation or repatriation for Indians although encouraging both voluntarily.

16th.—Announced that the new age limits for the Indian Civil Service open competition in England, namely 21 to 23, would be enforced in 1924.

18th.—Government of India issues a statement regarding the right of an officer to defend the policy of Government, more especially in connection with political matters.

20th.—The main decisions arrived at by the Select Committee of the Legislative Assembly, appointed to examine and report on the Esher Committee's report, published.

22nd.—A Government statement gives details of a fight between a party of police and the mob at Rae Bareilly, resulting in a number of casualties.

23rd.—Announced that the question of the military requirements of India would be submitted to a sub-committee of the Committee of Imperial Defence for consideration.

24th.—About 700 prisoners overpowered their warders and escaped from Rajshai jail.

26th.—The policy of the Government of India for the control and development of civil aviation in India outlined in the course of a letter from the Secretary of the Commerce Department to the local Governments and Administrations.—Death of His Highness Maha Shri Mohandevji, Rajasahib of Dharampur.

27th.—Six excise liquor shops attacked and destroyed by a mob at Nagpur, resulting in subsequent arrests and a riot in which the police were obliged to open fire, killing nine and injuring several others.

29th.—Final meeting of the first session of the Council of State and Legislative Assembly held at Delhi.—Lord Chelmsford, the retiring Viceroy of India, and Lady Chelmsford leave Delhi for Bombay *en route* for England.

30th.—Announced that the revised postal rates would be introduced on April 18.

31st.—Official account of the Rajshai jail escapes published.—Announced that free passages would be granted under certain conditions to officers of the Indian Service when proceeding to the United Kingdom or the Colonies on medical leave.—Publication of the text of the Gurdwara Bill, to be discussed by the Punjab Legislative Council.

APRIL.

1st.—All-India Congress Committee opens its sittings at Bezwada. Mr. Gandhi appeals for one crore of rupees and a crore of Congressmen.

2nd.—Arrival in Bombay of the Earl of Reading, India's new Viceroy, and departure of his predecessor, Lord Chelmsford.—Revised rules to govern the expenditure powers of the Government of India published.—Lord Chelmsford made a Viscount.

3rd.—Result of the census announced as showing India to have a population of slightly over 319 millions.

4th.—Announcement made by the South African Government that no legislation on the lines of the Asiatic Commission's report would be introduced during that session of the Assembly.

5th.—Trial of Mahant Narain Das and fifty five others in connection with the Nankana Sahib tragedy opened in Lahore.—Announcement made in the House of Commons that the Reforms Act would in no way affect the existing right of British-born subjects to sue for a breach of contract for personal services in India.

6th.—The shore end of the new Submarine telegraph cable connecting Madras and Singapore laid at the former place.—Committee appointed by the Bengal Government to examine the regulations for the licensing and control of taxicabs issues its report.—Mr. Montagu stated in the House of Commons that the proposals of the Government of India, if sanctioned, would reduce the fighting units of the army in India to approximately 6,000 British and 7,500 Indian soldiers under the pre-war strength.

7th.—The Fiji sugar industry threatened by a strike of 30,000 Indians.

8th.—The State Railway Engineering Department organised into two services, the Indian Service of Engineers and the Provincial Engineering Service.

9th.—All-India Marwari Conference met at Calcutta. The president refuted the idea that the Marwaris were gamblers and speculators.

10th.—Public Health Conference held at Calcutta.

11th.—Ferry boat plying between the Island of Hatiya and the mainland of Noakhali capsised, resulting in a serious loss of life.

12th.—Administration methods of the Military Farms Department reorganised.

15th.—National Medical School opened at Calcutta.

19th.—Annual meeting of the Bombay Millowners' Association, when the president condemned the insincere agitation going on in Lancashire.

21st.—Secretary of State gives his consent to an agreement between the British Government and the Governments of H. H. the Nawab of Bhawalpur and H. H. the Maharajah of Bikaner regarding the irrigation of certain tracts along the Sutlej and Chenab rivers.—Government of India 7 per cent. loan of 7½ millions announced and over-subscribed in London.

23rd.—Local clearing house for debts between British and Austrian nationals established in the Government of India.—Malabar Reforms Conference held at Madras under the presidency of Mrs. Besant, who showed what had been possible in a very short time under the reforms and declared that India was marching along the road to Home Rule faster than she had dared hope The Standing Joint Parliamentary Committee on Indian Affairs publishes a resolution with regard to procedure.

24th.—Doctor Thomas Quayle appointed Joint Secretary for Indian Students in association with Mr. N C. Sen.—The Secretary of State appoints a committee under the presidency of Lord Lytton to consider important matters relating to Indian students in the United Kingdom and to enquire into the working of the Indian Students Department.

24th —A serious riot breaks out at Giridih on the arrest of a Khilafat worker for molesting a woman.

25th - Serious riot occurs at Malegaon in the Nasik district involving the loss of many lives Kathiawad Political Conference opens at Rajkot.

27th —Lord Islington is chosen Chairman of the Joint Committee on Indian Affairs — Makin, on the North-West Frontier, evacuated by the Mahsuds after an attack by our troops.

MAY.

2nd. —Death of Mr. Rahimtulla Currimbhoy, a well-known mill-owner of Bombay.

3rd.—The Industries Department of the Government of India invites the opinions of the local Governments on the revised rules for the purchase of stores for the use of Government Departments —As a result of a discussion in the South African House of Assembly on the report of the Asiatic Commission, it was decided that segregation and repatriation were not practicable, but some sort of action should be taken.—Subadar-Major Ghulam Muhiyuddin Bahadur (82nd Punjabis), Risaldar-Major Ghulam Hussein (19th Lancers), Subadar Muhammad Azim Bahadur (82nd Punjabis) and Risaldar Laurasib Khan (Hodson's Horse) appointed King's Indian Orderly Officers for 1921.

4th.—It was announced in the House of Commons that the Imperial Government acknowledged India's right to a share of the German indemnity and that the amount was being discussed.

9th.—Calcutta tramway strike amicably settled.

11th.—Railway collisions occur on the G. I. P. and B. B & C. I. Railways at Mataundh and Rutlam, resulting in twelve being killed and thirty injured and one killed and thirteen injured respectively.

14th. —Labour trouble develops in some of the tea gardens of the Surma valley. Several labourers announced their intention of going to their homes and refused to work.—Control of alizarine dyes ceases.—Mr. Gandhi interviews the Viceroy.—Non-Brahmin Conference opens at Belgaum.

15th.—The United Provinces Government decides to appoint a committee to examine and report on the question of Government scholarships tenable abroad.

17th.—A fire breaks out in a firewood depot at Delhi, resulting in damage being done to the extent of 15 lakhs of rupees —An official statement regarding the escapes from the Rajshai jail shows that the number of prisoners who escaped was 669.—Return published regarding the casualties on the Frontier of British forces: 5,169 killed, 2,474 died and 829 wounded and missing

18th —Mount Everest Expedition leaves Darjeeling

19th —The Viceroy appoints a committee to examine the military requirements of India, with the object of preparing material for the sub-committee of the Committee of Imperial Defence.

23rd - The Industrial Conference opens its sittings at Simla

24th -Publication of the correspondence between the Government of India and the Secretary of State on the draft recommendations of the Washington Imperial Labour Conference.

25th.—The committee in their findings on the enquiry into the firing at Nagpur on March 28 hold that it was both unavoidable and restrained.

26th —Publication of the scheme by the Government of India for the employment of discharged officers —The deaths of Sir Mirza Abdul Hosain and Maharajah Bahadur of Balrampur reported.

27th. -Announcement regarding the constitution of the Auxiliary Force Medical Corps.—The coolies of the B. I. S N. workshops and the Union Dock, Calcutta, numbering about 5,000, go out on strike.

28th.—Serious fires break out at Ahmedabad resulting in severe damage and the loss of six lives.

30th —Loco. and traffic staff of the Burma Railway ask for permission to return to work.

31st.- At a dinner given in his honour at the Chelmsford Club, His Excellency the Viceroy made an impressive speech in which he pointed out his intentions for the future policy of Government and asked Indians to judge the action of Government by the results.

JUNE.

1st.—The Joint Committee on Indian Affairs recommends the application of the Government of India Act to Burma, and that the necessary legislation be passed without delay.

2nd.—The fifth Gujarat Rajkiya Parishad concludes its sittings at Broach after passing a number of resolutions concerning the achievement of swaraj and the furtherance of temperance.

3rd.—A Government communique makes it clear that they will enforce the law relating to offences against the State as, and when, they may think fit against any persons who have committed breaches of it.—Revised rates of pay for Postmasters-General sanctioned.

5th.—Death is announced from Kampadzong of Dr. Kellas, a member of the Everest Expedition.—Rear Admiral Lewis Clinton Baker appointed Commander-in-Chief of the East Indies' Station.

9th.—Indian Divorces Validity Bill passes its third reading in the House of Lords.

10th.—The Irrigation Review for 1919-20 is published, showing the area under irrigation to be 28 million acres, the largest on record.—The revised instrument of instructions to the Governor-General of India, in consequence of the passing of the Government of India Act, is issued under Royal Sign Manual.

12th.—A new department to deal with labour and industries is formed at the India Office.

14th.—The Viceroy holds his first levee at Simla.—The Calcutta tube railway survey is completed, showing that the project is feasible from an engineering point of view.

18th.—Sanction accorded to the revised rates of pay for Chaplains on the Indian Ecclesiastical establishment of the Government of India.

20th.—The deaths are reported of Mr R. J. Kent, Chief Engineer in Sind, and Raja Pratap Bahadur Singh of Pratapgarh.

21st.—It is announced that the Prince of Wales will land at Bombay in November.

22nd.—The strike of coolies of the B. I. S. N. workshops and Union Docks, Calcutta, comes to an end.—Mr. Sastri addresses the Imperial Conference in London on Indian problems.—Indian Divorces Validity Bill passes its second reading in the House of Commons.

24th.—Plans completed for a new garden suburb for Calcutta to be known as Regents Park.

25th.—A serious railway accident caused by a breach between Amroha and Chandnagar on the Oudh and Rohilkund Railway, results in the engine and four carriages falling into the water and the engine crew and 24 passengers being missing.—H. H. the Mir of Khairpur is formally installed on the *gadi*.

26th.—The Government of India decides that a committee should visit Fiji in the autumn to enquire into the conditions of the Indians residing there, to ascertain the causes of discontent and to advise as to whether or not Fiji offers a suitable field for Indian colonisation.

28th.—Revised rates of pay for British Officers of the Indian Army and Indian Officers with King's Commissions sanctioned.—The Burma Bill passes its third reading in the House of Lords and the Indian Divorces Validity Bill its third reading in the House of Commons.—The Indian Committee of the Imperial Institute in a report suggests that the Government of India should in every way encourage the Indian paper pulp industry.—Death of the Jam of Las Bela.

30th.—The Europeans of Kenya protest against the grant of any further concessions to Indians in that Colony.

JULY.

1st.—A serious riot breaks out at Dharwar following the sentencing of two Khilafat volunteers for robbery. The casualties were two rioters killed and several injured, while ten policemen were also injured.

2nd.—Government issues a statement giving the conditions under which indulgence passages are granted.

5th.—The syllabus for the examination of Indian gentlemen desirous of entering the Royal Military College, Sandhurst, is modified.

7th.—The committee appointed by Government to consider the question of improving the standards of accommodation and sanitary-conveniences for deck passengers submits its report.

8th.—The Viceroy in an important speech in reply to an address by the United Provinces Liberal Association made an appeal for sympathy and assistance in the arduous task with which the Government was faced.—An advisory committee is appointed in connection with the visit of H. R. H. the Prince of Wales.—Mr. Sastri makes a statement before the Imperial Conference regarding the position of British Indians domiciled in the Dominions and Colonies.

11th.—The Khilafat Conference closes its sittings after passing several resolutions relating to the Holy Places and the furtherance of the movement.

13th.—Indians in Kenya hold a protest meeting and pass a resolution declaring that Indians could only remain partners in the Empire on a condition of perfect equality of status with His Majesty's European subjects. Mr. Gandhi addresses an open letter to Englishmen and asks for support in the boycott of foreign cloth and in the anti-drink campaign.

14th.—His Imperial Majesty the Crown Prince of Persia arrives in Bombay on a short visit to India.

15th.—The death is announced of Major-General C. E. D. Budworth, R.A.

16th.—Application is made for sanction to construct a tramway from Dehra Dun to Mussoorie.

19th.—His Majesty the King approves of the privilege of allowing officers of the Indian Volunteer Corps to wear uniform on especial occasions throughout the Dominions.

20th.—The Committee appointed by the Government of India to consider the Indian Press Act, the Newspapers Incitement to Offences Act, etc., decides that the Acts ought to be repealed.

21st.—Zoroaster House for Parsi visitors opened in London.

22nd.—Memorial to the British, Anzac and Indian members of the Imperial Camel Corps who were killed or died in Egypt and Palestine unveiled in London.

25th.—The Railway Police Committee issues its report, which deals with a number of important questions in connection with the work of the Railway Police.—Committee on engineering education in India commences sitting at Simla.

26th.—A collision between a goods train and a mail train occurs between Rangoon and Mandalay resulting in 153 casualties of whom 98 were killed and 55 injured.

27th.—The *Gazette of India* announces the distinctions and rewards presented for services rendered in connection with the Waziristan Force. The official programme of the Prince of Wales' tour in India issued.—The Maharao of Kutch and Mr Sastri receive the freedom of the City of London.

29th.—The All-India Income-tax Committee publishes its report.

30th.—A communique from Simla sets out the facts regarding the meetings between the Viceroy and Mr. Gandhi regarding the proposed proceedings against the Ali Brothers.—Revised rates of pay for the Indian Police Service sanctioned.—The constitution of various corps and units of the Auxiliary Force, India, announced.

AUGUST.

4th.—The Imperial Conference in London passes a resolution recognising that in the interests of the solidarity of the Commonwealth it is desirable that the rights of Indians residing in the Colonies and Dominions be recognised.

5th.—One of the accused in the Nankana Sahib case makes a sensational confession regarding the tragedy.—Anglo-Indian and European Educational Conference meets at Simla to discuss the educational facilities provided for the children of those communities.

8th.—Discussion on the Burma Bill is dropped in the House of Commons.

9th.—The British reliefs for troops in India announced.

10th.—Sanction accorded by the Secretary of State to the Damodar canal project in the Burdwan District.

12th.—The *Gazette of India* publishes the report of the Indian delegates to the Geneva sessions of the League of Nations.—The Indian Parliamentary Committee gives a dinner in honour of Mrs. Besant at the House of Commons.—Mr. Montagu in an interview makes a full statement of his views in connection with the Imperial Conference.

13th.—Mr. Sastri made a Privy Councillor.

14th.—A National College is opened at Rangoon.

15th.—It was announced in the House of Commons that the Maharao of Kutch, Mr. Sastri and Sir William Meyer would be India's representatives at the meetings of the Assembly of the League of Nations.

16th.—Decided that civil officials of the railway, postal, telegraphic and survey departments who served with the Expeditionary Forces during the war in distinctly military capacities are to receive gratuities.

19th.—The *Times of India* inaugurates commercial wireless telephony in India by experimenting successfully between Poona and Bombay. The Government of India publishes an official statement regarding the withdrawal of charges in the Indian Munitions Board case.—As a result of several memorials the Government of India decides to grant revised scales of pay for officers in the Imperial Services.

20th.—The Government of India asks for opinions regarding the training of probationers for the Indian Forest Service.

22nd.—Rioters in Moplah country commence wrecking railway lines and telegraph wires and looting post offices.—Aeroplane crashes in Calcutta but without any loss of life.

23rd.—The rioting in Malabar grows worse and several casualties are reported.

25th.—Lord Lytton's Committee on Indian Students, it is announced, would visit India in November.

29th.—As a result of a fight between a party of British troops and a band of Moplah rebels about forty times as large near Manjeri, 400 rebels were killed.—Announcement made regarding the appointments to His Royal Highness the Prince of Wales' staff during his Indian tour.

SEPTEMBER.

2nd —Bombay Branch of the Institution of Engineers (India) formed —Repressive Laws Committee report signed. Export of wheat from India prohibited till at least March 1922 by the Government of India

3rd —Joint public sitting of the Indian Legislature addressed by His Excellency the Viceroy on several matters of political interest, more especially Malabar outbreak and Afghanistan—Revised scale of pay for temporary Indian Medical Service officers approved of by the Secretary of State.—Everest Expedition reports having found a way up to the summit and awaits the passing of the monsoon before making the final effort.

5th. —Both Houses of the Indian Legislature meet and pass resolutions welcoming the Prince of Wales and the Viceroy, and subsequently adjourn to discuss the Malabar outbreak —Calcutta tramwaymen again go out on strike

6th —Provisions of the Martial Law Ordinance 1921 are supplemented in a fresh ordinance —General looting breaks out at Meerut following the arrest of a bania by two officers.

7th —An account is received from Calicut of the terrible depredations practised by the Moplah rebels at Nilambur, where one of the rebel leaders sets up a Khalifat kingdom with himself as governor. —Another Natal ordinance directed against Indians is disallowed by the Governor General

9th —Sliding scale of promotion for officers in the Indian Army comes into force.

10th. —The Moplah rebels in most of the districts in Malabar go into hiding in the forests and hills.

12th —The Working Committee of the Indian National Congress approves of the adoption of civil disobedience in respect to the grazing tax in certain parts of Andhra, but with certain reservations.

13th —The Assessors in the Nankana Sahib case find Mahant Narain Das guilty.

15th —The Bill for the repeal of the Indian Press Act and others is introduced into the Legislative Assembly. —Indian Railway Committee issues its report urging the need for reform and reconstruction, its main suggestion being the abolition of the Railway Board and the substitution of a Railway Commission to advice a member for communications in the Governor General's Council —The Legislative Assembly passes a resolution for the appointment of a committee to consider the removal of all racial distinctions between Indians and Europeans in the matter of trial and punishment for offences —Dr Kitchlew is arrested in Simla.

16th —The Ali Brothers arrested and a Government of Bombay notification issued regarding its decision, with the consent of the Government of India, to prosecute them and certain others for offences under the Indian Penal Code

20th —Repressive Laws Committee issues its report recommending the repeal of all old Acts designed to meet a state of affairs which no longer exists

24th —The Senate of the Calcutta University decides to confer the honorary degree of Doctor of Laws on H. R. H the Prince of Wales

26th —Trial of the Ali Brothers commences at Karachi.

27th.—Nilambur relieved by British troops.

29th —Ali Brothers and others under trial committed to take their trial at the Sessions. The Legislative Assembly passes a resolution for an early reconsideration of the Constitutional Reforms.

30th —The Government of India announces its intention of calling for tenders in India and England simultaneously for the supply of railway locomotives The first call would be made on 1st October 1922.

OCTOBER.

1st.—A Punjab Mahomedan Deputation waited on the Viceroy.

3rd —As a result of an accident in one of the shafts of the Mysore Mines three men were killed and twenty injured —The practice of posting letters in London so as to catch the air mail and pick up the mail boat at Marseilles was discontinued.

4th.—The Benares University Senate waited on the Viceroy.

5th.—Mr Gandhi, Lala Lajpat Rai and fifty others issued a manifesto appealing to Indian soldiers and civilians to sever connection with Government.

6th.—A close contour survey for the Sukker barrage and canals authorised at an estimated expenditure of eleven lakhs of rupees.—H. R. H, the Prince of Wales intimates his desire that Municipalities and public bodies should not incur excessive expenditure on caskets, etc, during his tour. Indians in Kenya reject the Colonial Office proposals for a settlement of the Indian question, the prohibition of landholding being the stumbling block —Trial of Ali Musahar, a leading Moplah rebel, commences at Calicut.

7th —A *Gazette of India* Extraordinary announces the constitution of Burma as a Governor's province under the Government of India Act.—As a result of the Legislative Assembly refusing to sanction the grant necessary for the Indian Students' Committee's visit to India, Lord Lytton regrets that the Committee will not be able to make any definite recommendations.—The Working Committee of the Congress passes a resolution boycotting the Prince of Wales' visit,

8th.—Personnel of the Indian Fiscal Commission officially announced.—Government of India's views regarding the position of Indians in the Dominions outlined in the form of a memorandum.

10th —Annual session of the Indian Railway Conference Association meets at Simla.

12th —In the Nankana case the Mahant and seven others were sentenced to death for rioting and murder, eight others were transported for life and seventeen sentenced to seven years' imprisonment

14th —A memorial signed by about one thousand citizens of Calicut was drawn up for submission to the Viceroy asking for the services of more troops in the affected areas.

15th.—A *Gazette of India* Extraordinary publishes an ordinance to provide for the constitution of military courts for the trial of certain offences committed in any area in which martial law is in force Labour unrest breaks out all over the tea gardens H. M the King appointed the Prince of Wales to the Extra Knight Grand Commander of the Orders of the Star of India and the Indian Empire.

16th The Viceroy receives an address of welcome from the Maharajah of Kashmir.

17th.—Moplah rebels were again very active and carried on depredations to within twelve miles of Calicut

18th. —Tea garden trouble over.—The Indians in Kenya refused the offer of the Governor to nominate an Indian on the Executive Council and double the Indian representation on the Legislative Council - Announced that Mr Sastri would attend the Washington Conference.

19th.— British troops gain a decisive victory over the Moplah rebels in Malabar.—Announced that Mr. G L Corbett as Civil Adviser, Colonel Kenneth Wigram as Military Adviser, and Mr. G S Bajpai as Secretary, would accompany Mr. Sastri to Washington as the Indian delegation.

20th The terms of reference to the Committee appointed in connection with the constitution of Burma as a Governor's province announced

24th —The case against the Ali Brothers and others commenced in the Karachi Sessions Court. —Mr W G S Schwabe, K C, appointed Chief Justice to the Madras High Court —Government of India decided to send a deputation to British Guiana in connection with the proposed immigration scheme

25th —The Calcutta tramwaymen go out on strike —Debate opened in the House of Lords on India

26th H R H the Prince of Wales sails from Portsmouth for India

28th — An Indian Memorial was unveiled at Brighton by the Maharajah of Patiala

NOVEMBER.

1st —The Trial of the Ali Brothers and others at Karachi comes to an end with the acquittal of one of the accused and the conviction of all the others to two years' imprisonment on each charge, the sentences to run concurrently. —Indian Students Department of the India Office issues its annual report, showing that 1,500 Indian students were receiving education in England during that period

2nd.—Announcement made that British Members of Parliament would not visit India in the winter of 1921-22, but might do so the following year

3rd.—Calcutta Tramway service partially resumed.

4th.—Revised rates of pay for officers in the Indian Medical Service sanctioned. All India Congress Committee resolves to authorise every province on its own responsibility to undertake civil disobedience, including the non-payment of taxes.

5th —A serious riot breaks out at Howrah, resulting in several conflicts between the police and Khilafat volunteers.

7th. —Mr. Chamberlain refuses to allow a day for a debate on India in the House of Commons.—Second Session of the Chamber of Princes opened at Delhi. The Viceroy delivers an address in which he announces His Majesty's decision to abolish *nazrana*.

8th — Announced in House of Commons that the strength of the Indian Auxiliary Force exceeded 30,000 Government of India issue a statement explaining the scheme of the Secretary of State regarding the special terms to be allowed to those public servants in India who in consequence of the introduction of constitutional reforms wish to retire prematurely.

10th. Sir Edward Northey at a conference with European and Indian leaders at Nairobi, outlines certain proposals to form the basis of a conference on the Indian question

11th. —Armistice Day was generally observed all over India.

12th. —Mr Dadiba Merwanji Dalal, C. I. E., appointed to the Council of the Secretary of State on the resignation of Sir Sankaran Nair. —Mr A R. Knapp, I.C.S., appointed Special Commissioner for the Martial Law area in Malabar

14th. —The Indian Congress at Nairobi issues a communique regarding the negotiations between the European and Indian representatives of the Colony. "The Indians do not want a compromise," it says, "they want all or nothing"

17th —His Royal Highness the Prince of Wales arrives in Bombay.—Serious riots break out in Bombay owing to the agitation of the non-co-operators. Thirteen deaths are reported. The tentative scheme for a settlement

of the Indian question in Kenya is rejected by both the Europeans and Indians.

19th.—The Prince of Wales visits Poona.—Seven hundred rebels surrender in Malabar.—Various militant organisations in Calcutta are declared unlawful assemblies.

20th.—A tragedy occurs in Malabar where 56 prisoners are asphyxiated while being taken from one town to another in a railway van.

21.—The Prince of Wales reviews the police ex-service men and Boy Scouts and Girl Guides in Bombay and leaves the city at night.

22nd.—Complete order is restored in Bombay

23rd.—His Royal Highness arrives at Baroda.—The trial commences in Calcutta of 100 persons arrested during the hartal held in connection with the arrival of the Prince of Wales in India — A treaty of friendship is signed between the British Government and Afghanistan —The United Provinces declare militant organisations unlawful.

24th.—Sir Henry Dobbs receives the K.C.S.I. and the Viceroy's thanks in connection with his services in Afghanistan.—Rioting breaks out in Bangalore following the arrest of some Mahomedans, but order is restored.

25th.—The Prince of Wales arrives at Udaipur.—The Punjab Government follows the example of those of the United Provinces and Bengal with regard to volunteer organisations.

26th.—Sepoy Ishaw Singh, 28th. Punjabis, awarded the Victoria Cross for valour in Waziristan.—An important political pronouncement is made declaring that Government had changed its policy of patience to that of action for the preservation of law and order.

28th.—His Royal Highness arrives at Ajmer.—Fiscal Commission commences taking evidence at Karachi.

29th.—His Royal Highness arrives at Jodhpur.—A serious raid on Barshore by Wazirs is reported, resulting in two British officers and 39 Indian other ranks being killed, 21 Indian other ranks being wounded, and 20 taken prisoner.

30th.—Indian Moslem Delegation waited on the Viceroy.

DECEMBER.

1st.—His Royal Highness arrives at Bikaner.

4th.—The Afghan Frontier is realigned according to the provisions of the new Treaty.

5th.—The Bombay Government prohibits picketing.—Lord Sinha resigns from the Governorship of Behar and Orissa owing to ill-health.

7th.—The Prince of Wales arrives at Bharatpur.—A systematic picketing movement commences at Calcutta, and 200 arrests are made.

8th.—The Viceroy makes an important speech in Calcutta in reply to an address presented by the British Indian Association, in which he said Government would not sway one hair's breadth from the policy it had mapped out.

9th.—His Royal Highness arrives at Lucknow.—The name of the Imperial Service Troops is changed to "Indian State Troops." Eighty-five volunteers in Calcutta sentenced to imprisonment, and another 165 arrested.—A marked improvement in the situation in Malabar reported.

10th.—The challenge to the maintenance of law and authority made by the persistence of the methods of agitation which had been ruled unlawful, resulted in many arrests in different parts of India

12th.—His Royal Highness arrives at Allahabad.—Mr. Asaf Ali and 53 others arrested in Delhi. In an action between the troops and the rebels in Malabar the latter lost 48 killed and 11 captured.

13th.—The Prince of Wales arrives at Benares and receives the honorary degree of Doctor of Literature, conferred on him by the Benares University.

14th.—Prospectus is issued in London of a new ten million sterling Indian loan.—Press note issued by the Bombay Government giving a connected account of the Bombay riots. The police casualties were 83 wounded, while among the rioters 53 were killed and 298 wounded, and 341 arrests were made

17th Reported from Malabar that 1,909 rebels surrendered

16th.—Railway Finance Committee issues its report.

21st.—A representative deputation waited on the Viceroy to ask for the holding of a round table conference to discuss the situation in India, but the request was refused.

22nd.—His Royal Highness arrives at Patna.

23rd.—Indians in Kenya accept representation on the Executive and Legislative Councils, pending a settlement.

24th.—His Royal Highness arrives at Calcutta.

26th.—The Calcutta University confers the degree of Doctor of Laws on the Prince of Wales. Preliminary discussions in connection with the Congress meeting at Ahmedabad

27th.—The Government of India appoints a committee to consider the racial distinctions in criminal trials and report on the necessary modifications of the laws.

28th.—It is reported that normal conditions extend all over Malabar.—Victoria Memorial, Calcutta, opened by the Prince of Wales.—The Congress reject Pundit Malaviya's motion to drop civil disobedience and agree to a round table conference, and close after accepting Mr. Gandhi as Dictator and refusing to make a declaration of complete independence for India.

29th.—All-India Liberal Conference opens at Allahabad.

30th.—All-India Moslem League meets at Ahmedabad and the president appealed in his address for an Indian Republic, to be known as the United States of India.

31st.—Lord Lytton is appointed Governor of Bengal in succession to Lord Ronaldshay.

Bibliography of India.

The general work of reference in one compact volume about India is still the late Sir William W. Hunter's *The Indian Empire: Its Peoples, History and Products* (Smith Elder, 1893, 28/-) which contains within its 800 pp. all the information, excellently arranged and indexed, that the general reader requires about this country. Its historical sections are particularly good giving a rapid and comprehensive bird's-eye-view of the course of Indian history from the advent of the Mahomedans in the eighth century down to nearly the close of the nineteenth century. Its statistics are based on the Census of 1891 and are therefore somewhat out of date. But, with this slight drawback which can be remedied by consulting the latest annual "Statistical Abstract" (see below), it gives in the compass of one volume a comprehensive view, neither too blurred nor too diffuse, of the Indian Empire and its past and present state. A more detailed account of India is to be found in the first four volumes of *The Imperial Gazetteer of India* (Clarendon Press, 1907) Vols. I-IV, 6/-each). These volumes, which are introductory to the alphabetical Gazetteer (Vols. V-XXIV), are an expansion of Hunter's one volume work mentioned above; but all the chapters, with the exception of those on the history of British Rule, have been rewritten by expert writers who have been in most cases Indian administrators also. The statistics in these volumes are based on the Census of 1901. The second volume of the *Oxford Survey of the British Empire* (Clarendon Press, 1914. 15/-) is mostly devoted to India and contains an excellent concise account by various well known writers of the Indian Empire as it is to-day. The statistics of this volume are based on the latest Census of 1911. Sir Thomas Holdich's volume on *India* in the "Regions of the World" Series (Clarendon Press, 1904, 10/6) is a compact geographical account by an authoritative writer. The same author's *Gates of India* (Macmillan, 12 s. 6d.) is a useful historical and geographical work on the North-West Frontier of India. Dr. George Smith's *Student's Manual of the Geography of British India* (Murray, 1882, 7/6) may still be used with profit, though parts of it are obsolete. Sir Thomas Holderness (fourth) edition, 1911, of Sir John Strachey's *India*, originally published in 1888, contains the best, succint account of Indian administration and progress (Macmillan, 1911, 10/-). The same editor's little book in the Home University Library, *Peoples and Problems of India* (Williams and Norgate, 1912, 1/-) is a useful introduction to the study of present day India. A very good *Atlas of India* is published as Vol. XXVI of the *Imperial Gazetteer* (separately, 17/6 Clarendon Press, 1909). It contains 28 general and 18 provincial maps besides 16 plans of Cities, including 3 of Bombay, 2 of Calcutta and 1 of Madras, Delhi, Simla, etc., each. A somewhat older though still excellent atlas is *Constable's Hand Atlas of India* (Constable, 1893, 14/-). It has 60 maps and plans and is accompanied by an index of 86 pp. The companion volume *Hand Gazetteer of India* by Jas. Bartholomew (Constable, 1894, 12/-) is a very concise gazetteer based on the second edition of 1886 of Hunter's *Imperial Gazetteer*. An older and fuller gazetteer, though still having the advantage of being in one compact volume, is Lethbridge and Wollaston's revised abridgment of *Thornton's Gazetteer of India* (W. H. Allen, 1888, 21/-).

Official Publications.—The principal official publications of general interest and utility are the Annual Reviews (*India in* 1920 is the latest) by Mr. L. F. Rushbrook Williams, published by the Government of India and their accompaniment. *The Statistical Abstract for British India* (issued towards the close of the year, about 1/6); the report on the Census of 1911 (Vol. I, Calcutta, Rs. 5, Text, Vol. II, Appendix giving tables, etc.); *Statistics of British India* (4 Vol., Calcutta) Administrative, Judicial, &c., annual *Statement of the Trade of British India* with Foreign Countries (Calcutta) and the annual *Review of Trade* (Eyre and Spottiswoode, 2/-); *Financial Statement of the Government of India* (Eyre and Spottiswoode). Every ten years is issued an elaborate review of the period as a Decennial number of the Moral and Material blue-book (now discontinued) and those by J. S Cotton (pub. 1885) and by Sir Athelstane Baines (pub. 1894) are specially valuable. A "Memorandum on some of the Results of Indian Administration during the past Fifty Years of British Rule in India" issued in 1909 by the India Office (reprinted at Government Press, Calcutta, 1911, six annas, in a handy octavo) is a valuable summary of the improvements since 1858.

History.—It is still the fashion to call James Mill's *History of British India* (Vols. I-VI up to 1805; continuation by H. H. Wilson, Vols. VII-IX, index Vol. X., last ed. 1858, W. H. Allen) the standard work on the subject, but it is out of date and in parts wrong-headed. No other author of equal ability and repute has treated the subject on a large scale with the exception of Mr. Vincent Smith whose *Oxford History of India* has become the standard work. It is a handy volume copiously illustrated, (Clarendon Press, 1920, 12-6). Sir W. W. Hunter made the attempt but lived only to write two volumes dealing with the first century of the English in India up to 1700. (History of British India, Vols. I-II, 1899-1900, Longmans, 30/-). A masterly historical sketch of the whole period is to be found in Sir Alfred Lyall's *British Dominion in India*, (Murray, 1894, latest ed. 1907, 5/-) which is specially remarkable for the writer's theory that the British dominion in India grew and expanded on a regular plan foreseen by its founders and was not as is generally supposed the result of a happy chance. Another excellent and interesting sketch is contained in the *Historical Geography of India* by P. E. Roberts, who had assisted Hunter in the above mentioned work (Clarendon Press, 1920, 8/6). Miss Gabrielle Festing's two works, *When Kings Rode to Delhi* (Blackwood, 1912, 7/6) and *Strangers Within the Gates* (Blackwood, 1914, 7/6) give a popular

but accurate presentment of the Mughal and British periods. Marshman's *History of India* (3 Vols., Longmans, 1871, 22-6) gives an excellent account, neither too detailed nor too concise, of the whole history and may be recommended as the most readable history of India till the Mutiny. There is an abridgment of Marshman in one volume (Blackwood, 6--). Trotter's *History of India*, recently revised and brought up to date by W. H. Hutton (S. P. C. K., 1917, 10/-) is a good and accurate compendium, as also is Meadows Taylor's *Students' Manual of Indian History* (Longmans, 7/6) which has long been well known for presenting a vast amount of facts in a small compass and in an agreeable style. For the Mahomedan period the standard work is Elphinstone's *History of India* (Murray, 16/-). A much more elaborate work for the same period is Sir Henry Elliot and Jas Dowson's *History of India as told by its own Historians* (8 Vols., 1867-1877, £ 8-8-0) giving translations of the chief Mahomedan historians. For the pre-Mahomedan period Vincent Smith's *Early History of India* (Clarendon Press, 3rd ed., 1914, 16/-) is the latest and best work. Mr. Vincent Smith is also the author of *The Oxford History of India*, from the earliest times to the end of 1911 (Clarendon Press, 12/6). Romesh Dutt's *History of Ancient Civilisation in India* (2 Volumes, Trubner's Oriental Series, 21/-, 1893) and Mrs. Manning's earlier work *Ancient and Mediæval India* (2 Vols., 1869, 30/-, W. H. Allen) deal mainly with literature rather than history proper though they give a more or less vivid picture of those early times. The following books, which are published by the Clarendon Press, are of particular interest. *Hindu Manners, Customs and Ceremonies* by J. A. Dubois: The Abbe Dubois lived for many years amongst the people of S India and gained an extraordinary insight of their customs and habits (6*s*.), *Travels in the Mogul Empire*, 1636-68 by Francis Bernier (7*s*. 6*d*.), *Observations of the Mussulmans of India* made during twelve years' residence in their immediate society by Mrs. Meer Hassan Ali, an Englishwoman who married an Indian Mahomedan(7*s*. 6*d*.), *Rambles and Recollections of an Indian Official* by Major-General Sleeman (6*s*.), *Annals and Antiquites of Rajasthan* in 3 volumes (52*s*. 6*d*.), *The Story of My Life* by Col. Meadows Taylor, (16*s*.), *Early Travels in India*, 1583-1619, by William Foster, C.I.E., (10*s*. 6*d*.), *The Rights of the Twice Born* by Mrs. Sinclair Stevenson, *The latest and best books on the Brahman Caste* (21*s*.), *A History of the Maratha People*, by C. A. Kincaid and R. Parasnis (16*s*.)

Historical Biography.—The principal characters of Indian history, Hindu 'Mahomedan and British such as Asoka, Babar, Akbar, Clive, Warren Hastings, Dalhousie, etc., are individually treated in the well known *Rulers of India* series of historical and biographical monographs (28 Vols., Clarendon Press, 1890-1902, 2/6 each). In the English *Men of Action* series (Macmillan, 2/6 each) there are also volumes on famous Anglo-Indian statesmen, such as Sir Alfred Lyall's *Warren Hastings*, Archibald Forbes' *Havelock*, Sir Richard Temples *Lord Lawrence*, Sir W. Butler's *Charles Napier*. Among biographies of Anglo-Indian worthies may be mentioned as specially interesting and valuable Sir George Forrest's *Life of Lord Clive* (Cassell, two vols., 1919), Col. Malleson's *Warren Hastings* (Chapman and Hall, 1894, 16/-), Bosworth Smith's *Lord Lawrence* (2 Vols., Smith Elder, 1883, new ed., Nelson's series, 1/-) Herbert Edwardes and Merivale's *Sir H. Lawrence* (2 Vols., Smith Elder 1872), Sir W. Hunter's *Lord Mayo* (2 Vols., Smith Elder, 1875, 24/-), Sir W. Lee Warner's *Lord Dalhousie* (2 Vols., Macmillan, 1904, 25/-), Sir Alfred Lyall's *Lord Dufferin* (2 Vols., Murray, 1905, new ed, Nelson's series 1/-), Marshman's *Sir H. Havelock* (Longmans, 3/6), Martineau's *Sir Bartle Frere* (2 Vols., Murray, 1895, 32/-), Mallet's *Earl of Northbrook* (Longmans, 1910, 16/-), Lord Roberts' *Forty-one Years in India* (Macmillan, 1897, new ed. 6/-), Colebrooke's *Mountstuart Elphinstone* (2 Vols., Murray, 1884, 25/-), Trotter's *John Nicholson* (1897, Murray, 2/6) and *Bayard of India* (Outram) (Blackwood 5/-). Among noteworthy works treating of recent history since 1858 are Lovat Fraser's *India under Lord Curzon and After* (Heinemann, 1911, 16/-), Ladv Betty Balfour's *Lord Lytton's Indian Administration* (Longmans, 1899, 18/-), Sir W. Hunter's *Bombay*, 1885–1900, a Study of Indian Administration (Clarendon Press, 1892, 16/-), Col. Hanna's *Second Afghan War* (3 Vols, Constable, 1899–1907, 36/-), *Official History of the Second Afghan War* (Murray, 1905, 21/-). Sir John Adye *Indian Frontier Policy*, a historical sketch (Macmillan 1897, 6/-), Trotter's *India under Victoria* (2 Vols., W. H. Allen, 1886, 30/-).

For the Indian Mutiny the standard history is Kaye and Malleson's *History of the Indian Mutiny* (new ed. 6 vols. Longmans, 21/-). Sir George Forrest's *History of the Mutiny* (4 vols., 1904–1914, Blackwood, 64/-) gives the chief records in the Indian archives. The best one-volume narratives are Malleson's shorter work. *Indian Mutiny* (in Messrs. Seeley's "Events of Our Own Times" series 5/-) and T. Rice Holmes' History of *The Indian Mutiny* (1883, W. H. Allen, new ed. Macmillan, 15/-8).

Constitution and Administration.—The changes lately effected in the constitution of the Indian Government have been embodied in the Report on Indian Constitutional Reforms, drawn up by the Secretary of State and the Viceroy (the Montagu-Chelmsford Scheme) and published in a handy octavo (Government Press, Calcutta, July 1918, one rupee.) The most comprehensive book on the new constitution is *Dyarchy* by Lionel Curtis (Clarendon Press, 1921 : 31-6) which contain all the documents, etc., relating to the reform scheme. At the head of earlier books on the Indian Constitution, but now necessarily out of date, stands Sir Courtenay Ilbert's "*The Government of India* being a Digest of the Statute Law relating thereto with historical introduction and explanatory matter" (Clarendon Press, 1st ed., 1898; 2nd ed., 1907, 3rd ed., 1915, 14/-; the first edition contains important constitutional documents such as minutes, despatches, charters, etc., covering 130 pp. which have been omitted in the subsequent issues.) The Digest drawn up by Sir C. Ilbert many years ago has been now embodied in the main in the "Government of India Act of 1915", which contains the entire body of law relating to the Government of India and which has been officially issued in octavo form (price 7*d*. Eyre and Spottiswoode). A supple-

ment to Ilbert's third edition gives a comparison between the Digest given in the book and this Act (1916, 1/-) The constitutional documents from the Regulating Act of 1773 down to the Consolidating Act of 1915 have been printed in handy form in P. Mukerji's *Indian Constitutional Documents* (1915, Calcutta, Thacker, Spink, Rs. 6); of the second ed. Vol. II, Rs. 3 has been issued in 1918 containing an historical introduction divided into two parts dealing with English political institutions and the present working constitution of India. The important constitutional documents have been also included in A. R. Iyengar's *Indian Constitution* (1909, 2nd enlarged ed. 1913, Loganatham, Madras, Rs. 3) which contains an historical view of the various administrative institutions. The documentary matter extends to nearly 250 pp. Chesney's *Indian Polity* (3rd ed. 1894, Longmans) gives an excellent historical view of the system of administration as it grew up from the early days of the English in India down to the end of the nineteenth century. Sir William Lee Warner's *The Citizen of India* (1897, Macmillan 2/6) gives in brief outline a very good sketch of Indian administration. A more up-to-date work is C. Anderson's *British Administration in India* (Macmillan). H. A. D. Phillips' *Our Administration of India* (1888, W. Thacker, London, 6/-) gives an account of the Revenue and Collectorate Administration in all departments, and though this is done with special reference to Bengal, it is more widely useful. A. Mackenzie's *How India is Governed* (1882, Kegan Paul, 2) is a very brief sketch of the Indian constitution and administration and of England's work in India. For the system of judicial administration Herbert Cowell's *History and Constitution of the Courts and Legislative Authorities in India* (1872, 2nd ed., 1884, Thacker Spink, Calcutta, Rs. 6/ is still useful, for the historical part.

Economics, Famines, etc.—Baden Powell's Land Revenue and Tenure in British India (2nd ed., 1907, revised by Sir T. Holderness, with an appendix added in 1912, 5/-, Clarendon Press) gives an account of land revenue system in India. Sir W. Hunter's *Annals of Rural Bengal* (1868, new ed., 1897, Smith Elder, 16/-) and his *Orissa* (2 vols., 1872, Smith Elder, 32/-) give a good idea of the economic condition of eastern India when it passed under British Rule. J. C. Jack's *The Economic Life of a Bengal District* (1916, Clarendon Press, 7/6) is an economic study of the people's life based on the minute data collected from innumerable families for the record of rights of Bengal and is of great value in estimating the resources of the people and the economic results of British rule. Dr. H. Mann's *Land and Labour in a Deccan village* (Oxford University Press; 2 vols., Rs. 6) and Dr. Slater's *Some South Indian villages* (Oxford University Press, Rs. 5) deal with agricultural economics. Sir Theodore Morison's *Industrial Organisation of an Indian Province* (1906, Murray. 10/6) reviews the principal economic facts and shows their relation to the abstract science of economics. The author treats specially of the United Provinces to which his personal observation was mainly confined. Morison's *Economic Transition in India* (1911, Murray) deals with the development of industrial and economic resources of the country. Romesh Dutt's *Economic History of India under Early British Rule* (1902, Kegan Paul, 16) and the same in the *Victorian Age* (1904, Kegan Paul, 1904) are a powerful though one-sided indictment of British economic and land revenue policy. A valuable book on the co-operative system is R. B. Ewbank's *Indian Co-operative Studies* (Oxford University Press.). Dutt, who is a staunch champion of the Permanent System of land tenure in vogue in Bengal and of its introduction into other parts of India, in his *Famines and Land Assessments in India* (1899, Kegan Paul, 7/6) on the same lines asserts that famines are due to the land policy of the Government. On Famines the best books are the Reports of the Famine Commissions pub. 1885, 1887, 1898 (Eyre and Spottiwoode). A good narrative of the last great famine of 1899–1900 is to be found in Vaughan Nash's *The Great Famine its causes* (1900, Longmans, 6/-). On the earlier great Bengal Famine, Sir Bartle Frere's *The Impending Bengal Famine*, and how to prevent future famines in India, (1874, Murray, 5/-) is useful and suggestive. Charles Blair's *Indian Famines* in their historical and financial aspects (1874, Blackwood 5/-) contains good remarks on preventive and mitigating measures. Loveday's *History and Economics of Indian Famines* (2s. 6d.) is a later book of the same kind. For public works, Railways, etc., Thornton's *Indian Public Works* (1875, Kegan Paul, 5/-) MacGeorge's *Ways and Works in India* (1893, Constable, 14/-), Horace Bell's *Railway Policy in India* (1894, 12/-), Deakin's *Irrigated India* (1893, Spon, 8/6), Buckley's *Irrigation Works of India* (1905 Spon, 42/-) Valentine Ball's *Coal Fields of India* (new edition, 1914, Calcutta), Report of the *Irrigation Commission* (1905, Eyre and Spottiwoode).

On **Finance** the work of the Strachey Brothers, Sir John and Sir Richard, *Finances and Public Works of India* (1882, Kegan Paul, 10/6) is valuable as describing the system of Indian Finance by persons who had intimate knowledge and personal experience. Reports of the Indian Currency Committee, 1893 and 1899, and of the Royal Commission on the administration of the expenditure of India, 1900, contain a vast mass of useful material. *Indian Currency* (1878, Longmans 2/-), by Dunning Macleod, treats of the means of introducing a Gold Currency in India, and of extending Banking and Paper Currency. H. J. Tozer's *British India and its Trade* (1902) gives a good view of the trade and surveys its growth during the latter half of the nineteenth century. Prof. Lees Smith's *Studies in Indian Economics* (1909, Constable, 3/6) and Jadunath Sarkar's *Economics of British India* (4th ed., 1917, Sarkar and Sons, Calcutta) are good introductions to the subject. The former is a series of lectures delivered by the author for the Bombay Government. The Exchange question is briefly explained in F. V. Rushforth's *The Indian Exchange Problem* (Oxford University Press: 1921. Re. 1-6).

The Protected States.—Malleson's *Native States of India* (1875, W. H. Allen, 18/-), gives an historical sketch of the various states. The author was then connected with the state of Mysore as the guardian of its young ruler. The work of another official who was connected

with Mysore as its Resident at the end of his Indian career, Sir W. Lee-Warner, *The Native States of India* (2nd ed., 1910, Macmillan, 12s. 6d. 1st ed., 1894, under title "Protected Princes of India") whilst giving what he calls an "Account of India under Home Rule", chiefly discusses the question of the position of these states in relation to the British Government. A Punjab official, Sir Charles Tupper, in his *Our Indian Protectorate* (1893, Longmans, 16/-) similarly treats of the relations between the British Government and its Feudatories, but goes more into the past and has instructive chapters on indigenous home rule under the Mahrattas, the Sikhs, the Mahomedans, etc. This valuable work is now thoroughly out of print, but a good vernacular translation in Gujarati by A. N Buch (1900 Rajkot) is available. Sir Lepel Griffin's *Punjab Chiefs* (1865 Trubner) and *Baias of the Punjab* (1870, 2nd ed. 1873, Trubner, 20/-) give in considerable detail the history of the principal Punjab states like Patiala, Kapurthala, Nabha, etc. Massy prepared a new edition of the former book (1889, Allahabad, Pioneer Press) and completed it by another *Chiefs and Families of Note in the Punjab* (1890, Allahabad, Pioneer Press) and they give short notices of all the ruling chiefs of the Punjab. Aberigh Mackay who was tutor to the Raja of Ratlam in Central India and Principal of Rajkumar College at Indore, wrote on the *Chiefs of Central India* (1879) and on the *Native Chiefs and their States in 1877* (1878). Both books are noteworthy. Aitchison's *Treaties, Engagements and Sanads* relating to India and the neighbouring countries (3rd ed., 1893, 11 volumes, Calcutta, Government Press, Rs. 34) is the standard collection of all the treaties with the Native Feudatory States. The relations with the Nizam are investigated in H. G. Brigg's *The Nizam* (2 vols., 1861, Quaritch, 28/-) and Hastings Fraser's *Our Faithful Ally, the Nizam* (1865, Smith Elder 18/-). The relations with the Gaekwar of Baroda are exhaustively treated in *The Guicowar and his Relations with the British Government* (1863, Education Press, Bombay) by Col. R. Wallace who was Resident at Baroda.

INTEREST TABLE.

From 5 to 12 per cent. on Rupees 100.

Calculated for 1 *Year*, 1 *Month* (*Calendar*), 1 *Week, and* 1 *Day* (365 *Days to Year*), *the Decimal Fraction of a Pie for the Day being shown for the Day.*

Per cent.	1 *Day.*	1 *Week.*	1 *Month.*	1 *Year.*
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
5	0 0 2·630	0 1 6	0 6 8	5 0 0
6	0 0 3·156	0 1 10	0 8 0	6 0 0
7	0 0 3·682	0 2 1	0 9 4	7 0 0
8	0 0 4·208	0 2 5	0 10 8	8 0 0
9	0 0 4·734	0 2 9	0 12 0	9 0 0
10	0 0 5·260	0 3 0	0 13 4	10 0 0
11	0 0 5·786	0 3 4	0 14 8	11 0 0
12	0 0 6·312	0 3 8	1 0 0	12 0 0

Indian Stamp Duties.

	Rs.	a.
Acknowledgment of Debt ex. Rs. 20 ..	0	1
Affidavit or Declaration	1	0
Agreement or Memo. of Agreement—		
(a) If relating to the sale of a bill of exchange	0	2
(b) If relating to sale of a Government security, or share in an incorporated company or other body corporate—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000 or part.		
(c) If not otherwise provided for ..	0	8
Appointment in execution of a power ..	15	0
Articles of Association of Company ..	25	0
Articles of Clerkship 250		0
Award, any decision in writing by an Arbitrator, other than by an Order of the Court. Where the value does not exceed Rs. 1,000, same duty as a Bond.		
In any other case	5	0
Bill of Exchange or Promissory Note payable on demand	0	1
Where payable otherwise than on demand but not more than one year after date or sight—Not exc. Rs. 200, a. 3; exc. Rs. 200, not exc. Rs. 400, a. 6; exc. Rs. 400, not exc. Rs. 600, a. 9; exc. Rs. 600, not exc. Rs. 800, a. 12; exc. Rs. 800, not exc. Rs. 1,000, a. 15; exc. Rs. 1,000, not exc. Rs. 1,200, R. 1 a. 2; exc. Rs. 1,200, not exc. Rs. 1,600, R. 1 a. 8; exc. Rs. 1,600, not exc. Rs. 2,500, Rs. 2, a. 4; exc. Rs. 2,500, not exc. Rs. 5,000, Rs. 4 a. 8; exc. Rs. 5,000, not exc. Rs. 7,500, Rs. 6 a. 12; exc. Rs. 7,500, not exc. Rs. 10,000. Rs. 9; exc. Rs. 10,000, not exc. Rs. 15,000, Rs. 13 a. 8; exc. Rs. 15,000, not exc. Rs. 20,000, Rs. 18; exc. Rs. 20,000, not exc. Rs. 25,000, Rs. 22 a. 8; exc. Rs. 25,000, not exc. Rs. 30,000, Rs. 27; and for every add. Rs. 10,000, or part thereof, in excess of Rs. 30,000, Rs. 9.		
Where payable at more than one year after date or sight, same duty as a Bond.		
Bill of Lading	0	4
Bond (not otherwise provided for)—		
Not exc. Rs. 10..	0	2
Exc. Rs. 10, but not exc. Rs. 50 ..	0	4
Exc. Rs. 50, but not exc. Rs. 100 ..	0	8
Up to Rs. 1,000, every Rs. 100 or part	0	8
For every Rs. 500 or part, beyond Rs. 1,000	2	8
Bond, Administration, Customs, Security or Mortgage Deed—For amount not exceeding Rs 1,000, same duty as a Bond.		

	Rs.	a
In any other case..	5	0
Cancellation	5	0
Certificate or other Document relating to Shares	0	1
Charter Party	1	0
Cheque	0	1
Composition—Deed	10	0
Conveyance, not being a Transfer—		
Not exceeding Rs. 50	0	8
Exceeding Rs. 50, not exceeding Rs. 100	1	0
For every Rs. 100 or part in excess of Rs. 100 up to Rs. 1,000	1	0
For every Rs. 500, or part thereof, in excess of Rs. 1,000..	5	0
Copy or Extract—If the original was not chargeable with duty, or if duty with which it was chargeable does not exceed 1 Rupee..	0	8
In any other case	1	0
Counterpart or Duplicate—If the duty with which the original instrument is chargeable does not exceed one rupee —The same duty as is payable on the original. In any other case	1	0
Delivery Order	0	1
Entry in any High Court of an Advocate or Vakil 500		0
In the case of an Attorney 250		0
Instrument—Apprenticeship	5	0
Divorce	1	0
Other than Will, recording an adoption or conferring or purporting to confer Authority to adopt	10	0

Lease—Where rent is fixed and no premium is paid, for less than 1 year, same duty as Bond for whole amount; not more than 3 years, same as Bond for average annual rent reserved; over 3 years, same as Conveyance for consideration equal to amount or value of the average annual rent reserved; for indefinite term, same as Conveyance for a consideration equal to the amount or value of the average annual rent which would be paid or delivered for the first ten years if the lease continued so long; in perpetuity, same as Conveyance for consideration equal to one-fifth of rents paid in respect of first 50 years. Where there is premium and no rent, same as Conveyance for amount of premium; premium with rent, same as Conveyance or amount of premium in addition to the duty which would have been payable on the lease if no fine or premium or advance had been paid or delivered.

	Rs.	a.
Letter—Allotment of Shares	0	1
Credit	0	1
License	10	0
Memo. of Association of Company—If accompanied by Articles of Association	15	0
If not so accompanied	40	0
Notarial Act	1	0
Note or Memo, intimating the purchase or sale—		
(*a*) Of any Goods exceeding in value Rs. 20	0	2
(*b*) Of any Stock or marketable Security exceeding in value Rs. 20—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000, or part.		
Note of Protest by a Ship's Master ..	0	8
Partnership—Where the capital does not exceed Rs. 500	2	8
In any other case	10	0
Dissolution of	5	0
Policy of Insurance—		
(1) *Sea*—Where premium does not exceed rate of 2a., or ½ per cent. of amount insured	0	1
In any other case for Rs. 1,500 or part thereof	0	1
(2) *For time*—For every Rs. 1,000 or part insured, not exc. 6 months ..	0	2
Exceeding 6 and not exceeding 12 months	0	4
If drawn in duplicate, for each part:—Half the above rates, for Sea and Time.		
(3) *Fire*—When the sum insured does not exceed Rs. 5,000..	0	8
In any other case	1	0
In respect of each receipt for any payment of a premium on any renewal of an original policy—One half of the duty payable in respect of the original policy in addition to the amount, if any, chargeable under Art. 53 (*Receipt*).		
(4) *Accident and Sickness*—Against Railway accident, valid for a single journey only	0	1
In any other case—for the maximum amount which may become payable in the case of any single accident or sickness where such amount does not exceed Rs. 1,000, and also where amount exc. Rs. 1,000, for every Rs. 1,000 or part	0	2
(5) *Life, or other Insurance, not specifically provided for*—		
For every sum insured not exceeding Rs. 250	0	2
For every sum insured exceeding Rs. 250 but not exceeding Rs. 500	0	4
For every sum of Rs. 1,000 in excess of Rs. 500	0	6
If drawn in duplicate, for each part—		
Half the above rates.		
In case of a re-insurance by one Company with another—¼ of duty payable in respect of the original insurance, but not less than 1 anna, or more than 1 R.		
Power of Attorney—		
For the sole purpose of procuring the registration of one or more documents in relation to a single transaction or for admitting execution of one or more such documents	0	8
When required in suits or proceedings under the Presidency Small Causes Courts Act, 1882	0	8
Authorising 1 person or more to act in a single transaction other than that mentioned above	1	0
Authorising not more than 5 persons to act jointly and severally in more than 1 transaction, or generally ..	5	0
Authorising more than 5 but not more than 10 persons to act	10	0
When given for consideration and authorising the Attorney to sell any immovable property—The same duty as a *Conveyance* for the amount of the consideration.		
In any other case, for each person authorised	1	0
Protest of Bill or Note	1	0
Proxy	0	1
Receipt for value exc. Rs. 20	0	1
Reconveyance of mortgaged property—		
(*a*) If the consideration for which the property was mortgaged does not exceed Rs. 1,000—the same duty as a conveyance for the amount of such consideration as set forth in the Reconveyance.		
(*b*) In any other case	10	0
Release—that is to say, any instrument whereby a person renounces a claim upon another person or against any specified property—		
(*a*) If the amount or value of the claim does not exceed Rs. 1,000—the same duty as a Bond for such amount or value as set forth in the Release.		
(*b*) In any other case	5	0
Respondentia Bond—The same duty as a Bond for the amount of the loan secured.		
Security Bond—(*a*) when the amount secured does not exceed Rs. 1,000—the same duty as a Bond for the amount secured.		

	Rs.	a.
(*b*) In any other case	5	0
Settlement—The same duty as a Bond for the sum equal to the amount or value of the property—settled as set forth in such settlement.		
Revocation of Settlement.—The same duty as a Bond for a sum equal to the amount or value of the property concerned as set forth in the instrument of revocation but not exceeding ten rupees.		
Share-warrant to bearer issued under the Indian Companies Act.—One and a half times the duty payable on a conveyance for a consideration equal to the nominal amount of the shares specified in the warrant.		
Shipping Order	0	1
Surrender of Lease—When duty with which lease is chargeable does not exceed Rs. 5 :—The duty with which such Lease is chargeable. In any other case	5	0
Transfer of Shares—One-half of the duty payable on a Conveyance for a consideration equal to the value of the share.		
Transfer of any Interest secured by a Bond, Mortgage-deed, or Policy of Insurance—If duty on such does not exceed Rs. 5—The duty with which such Bond, &c., is chargeable. In any other case	5	0
—Of any property under the Administrator General's Act 1874, Section 31..	10	0
—of any trust property without consideration from one trustee to another trustee or from a trustee to a beneficiary—five rupees or such smaller amount as may be chargeable for transfer of shares.		
Transfer of Lease by way of assignment and not by way of under-lease—The same duty as a conveyance for a consideration equal to the amount of the consideration for the transfer.		
Trust, Declaration of—Same duty as a Bond for a sum equal to the amount or value of the property concerned, but not exceeding	15	0
Revocation of—Ditto, but not exceeding	10	0
Warrant for Goods..	0	4

WIRELESS TELEGRAPHY.

It was decided during the year 1919-20 to form a separate Wireless branch of the Telegraph Department to deal with all matters connected with civil wireless telegraphy in India and in pursuance of this decision five officers were brought out from England to inaugurate the branch.

All wireless stations worked satisfactorily throughout the year, except at times of abnormally heavy atmospheric disturbances, and gave valuable assistance on occasions when communication by the land lines was interrupted. Wireless communication was carried on between Bombay and Aden, Bombay and Ceylon, the Bay stations and Penang, and Karachi and the Persian Gulf. Experiments were also commenced with a view to establishing a wireless service between Burma and the Malay Peninsula but these had unavoidably to be postponed.

New apparatus was imported which considerably improved the efficiency of the several stations equipped with it, particularly as regards receptivity during unfavourable conditions, and certain modern transitting apparatus employing thermionic valves was also obtained and tested for use in India.

It was found necessary to form a combined civil and military school at Karachi as a temporary measure to meet a serious shortage of operations for civil and military requirements.

Licences to Officers.—The Government of India have decided that the granting of licences to military officers in respect of wireless telegraph apparatus used for experimental purposes shall be regulated by the following general principles: (1) When an officer conducts experiments in wireless telegraphy in his official capacity at the expense of Government no licence is required, but only executive permission, which may be given so far as the Telegraph Department is concerned by the Director-General, Posts and Telegraphs.

(2) When an officer carries on experiments as a private individual at his own expense, he must obtain a licence. If the approval of the military authorities is required to what he proposes to do, he should obtain such approval before the Director-General, Posts and Telegraphs, is approached. The licence will then be submitted by the Director-General, Posts and Telegraphs, for the sanction of the Government of India.

(3) With reference to the above, attention is drawn to the necessity for applying for licences to own and use wireless telegraphy apparatus or installations, experimental or otherwise. Applications for such licences will be submitted through the Chief of the General Staff and will contain particulars regarding the apparatus showing (*a*) system it is proposed to employ, (*b*) maximum range of signalling with applicant's own receiving apparatus, (*c*) power (current and voltage), (*d*) source of power.

Imperial Wireless Chain :—There was much discussion during the year over the establishment of an Imperial Wireless Chain, which was pressed on the Home Authorities by the Empire Press Union amongst other bodies. But no real progress has been made, through the obstruction of the British Post Office. The position is briefly as follows. The Indian Government is perfectly willing to take its place in the wireless chain. But it has not the capital funds for the erection of the necessary high-power station, nor has it the technical staff to operate it. Therefore it is dependent on outside assistance. The only British Company with experience of erecting and operating high-power stations is the Marconi Company. The Government of India therefore concluded the basis of a contract with the Marconi Company for the erection and working of a high-power station in India. But the Government of India insist on direct communication with the United Kingdom. They maintain that this is practicable. As a matter of fact India is already in daily wireless communication with the Marconi Station at Carnarvon, although that station was constructed for the Atlantic and not for the eastern traffic. They maintain that it is desirable, for with traffic from various quarters concentrating at Cairo there is bound to be congestion. Further, the interposition of an intermediary station at Cairo will make the system unprofitable. To this the British Post Office returns a stubborn non-possumus. It is experimenting with a system of its own called the Poulsen arc, which has admitted defects. It has erected a high-power station at Leafield, which is working badly; it is erecting another high-power station at Cairo. But this is a system with which neither India nor Australia will cooperate; there will be no Imperial wireless chain until the obstructive obstinacy of the British Post Office is overcome.

Who's Who in India.

ABBOTT, EVELYN ROBINS, C.I.E.(1921), I.C.S. Punjab Commn. *b.* 9 May 1873. *Educ.*: Bath Coll. and Balliol Coll. *m.* Lillian, *d.* of Sir W. O. Clark, Kt. (I.C.S. retd.) *Address*: Commissioner's House, Multan.

ACHARIYAR, P., SIR RAJAGOPALA, K.C.S.I. (1920), C.I.E., Member of Madras Executive Council. *Educ.*: Madras University. Entered I.C.S., 1888. Diwan of Cochin, 1896-1902; Diwan of Travancore, 1907-14; Secretary to Government of Madras, 1914. *Address*: Madras.

ADVANI, MOTIRAM SHOWKIRAM, Kaiser-i-Hind Gold Medal (1919); District Judge, Broach, since 1917. *b.* 12 October 1868. *m.* Margaret Annesley, daughter of the late Rev. Charles Voysey. *Educ.*: The Albert School and Presidency College, Calcutta. Barrister (Inner Temple), 1892; Practised in Karachi, 1892-1904; Assistant Judge, Hyderabad, 1904; Acted as District Judge, Hyderabad, 1905; Permanent District Judge, 1911. Served in Thana and Surat. *Address*: Broach.

AFSUR-UL-MULK, AFSUR-UD-DOWLA, AFSUR JUNG, MIRZA MAHOMED ALI BEG, NAWAB, Lieut.-Col.; K.C.I.E. (1908); C.I.E. (1897); M. V. O. (1906); Hon. A.D.C. to Nizam of Hyderabad; Chief Commander, H.E.H. the Nizam's Regular Force, 1916; *b.* Aurangabad (Deccan); *o. s.* of late Mirza Vilayet Ali Beg. *Educ.*: Aurangabad. Ressaldar, Hyderabad Contingent; Commander, Golconda Brigade, since 1885; Hyderabad Imperial Service Troops, since 1893 (both of these he raised); Commander, Regular Troops, since 1897. Served in the Afghan War, 1879-1880; Black Mountain Expedition, 1888; China Expedition, 1900; received title of Afsur Jung, 1884; and of Afsur Dowla, 1895; raised to Afsur-ul-Mulk, 1903; Hon. Col., 20th Royal Deccan Horse; on Staff, Imperial Service Cavalry Brigade, Indian Expeditionary Force, Egypt, 1915; on Staff, Indian Cavalry Corps and A.D.C. to Sir John French, France, 1915-16. *Address*: Rahut Munzil, Hyderabad (Deccan).

AGA KHAN, AGA SULTAN MAHOMED SHAH, G.C.I.E. (1902); G.C.S.I. (1911); K.C.I.E. (1898); LL.D., Hon. Camb; *b.* 1875; Brilliant Star of Zanzibar, 1900, 1st Class; has many religious followers in East Africa, Central Asia and India; head of Ismaili Mahomedans; granted rank and status of first class chief with salute of 11 guns in recognition of loyal services during European War. *Address*: Aga Hall, Bombay.

AHMAD, DR. ZIA UDDIN, C.I.E., Principal, M.A.O. Coll., Aligarh. *b.* 1878. *Educ.*: Aligarh, Trin. Coll., Cambridge. (Sir Isaac Newton Scholar) Gottingen (Ph. D.) and Paris. Member of Calcutta University Commn. *Address*: Muslim University, Aligarh.

AIKMAN, DAVID WANN, C.I.E. (1912), Consulting Engineer to the Cawnpore Improvement Trust. *b.* 8 December 1863. *Educ.*: Cooper's hill. *m.* Marion Drummond Stewart. Joined P. W. D., 1885. Retd., 1918. *Publication*: Roorkee treatise on water supply. *Address*: The Shrubbery, Simla, and Civil Lines, Cawnpore.

AINSCOUGH, THOMAS MARTLAND, O.B.E. (1918). His Majesty's Senior Trade Commissioner in India and Ceylon. *b.* 1886. *m.* Mabel, daughter of W. Lincolne of Ely, Cambs. *Educ.*: Manchester Gr. School; Switzerland and Manchester University. In business in China, 1907-12; Spl. Commissioner to the Board of Trade in China, 1914; Secretary, Board of Trade Textile Committee, 1916. Sec., Empire Cotton Growing Committee, 1917; Expert Assist. to Persian Tariff Revision Commission, 1920. *Publication*: "Notes from a Frontier." *Address*: Allahabad Bank Buildings, 6, Royal Exchange Place, Calcutta.

AIYER, SIR P. S. SIVASWAMY, K.C.S.I.(1915); C.S.I. (1912); C.I.E. (1908). Retd. Member, Executive Council, Madras; Member of the Indian Legislative Assembly, 1920. *b.* 7 Feb. 1864. *Educ.*: S. P. G. Coll., Tanjore; Presidency College, Madras. Vakil (1885); Advocate General, Madras, 1907-12; Member of Executive Council, Madras, 1912-17; Vice-Chancellor, University of Madras, 1916-18; Vice-Chancellor of Benares Hindu University, 1918-19. *Address*: Sudharma, Edward Elliot's Road, Mylapore, Madras.

ALI, MOHAMED. *b.* December 1878. *Educ*: Rampur State School; Bareilly High School. M. A. O. Coll., Aligarh; and Lincoln Coll., Oxford. Chief Educational Officer, Rampur (State), (1902-03); H. H. the Gaekwar's Civil Service (1904-1910); Editor and Proprietor of the *Comrade*, weekly English newspaper (Calcutta 1911-12, Delhi 1912-1914) and of the *Hamdard*, Urdu daily newspaper (Delhi 1913-1915); Interned under the Defence of India Act at Mehrauli, Lansdowne, and Chhindwara (1915-19); Confined in Betul (C. P.) Jail (June to December 1919) under Regulation III of 1818; Sentenced to two years' rigorous imprisonment, Nov. 1921; Head of the Indian Khilafat Delegation to Europe (Feb. to Oct. 1920); Founded the All-India Muslim League in 1906; Khuddam-i-Kaaba Society in 1913 and the National Muslim University, Aligarh, 1920. *Publication*: "Thoughts on the Present Discontent" (1908).

ALI, SHAUKAT. *Educ.*: M.A.O. Coll., Aligarh (Capt. Cricket XI). In Govt. Opium Dept. for 15 years. Sec. and Organiser, Aligarh Old Boys' Assoc. Trustee, M.A.O. Coll. Organised collection of funds for Aligarh University. Interned during the war. Prominent leader of the Khilafat movement, 1919-20, and of Non-co-operation movement. Sec., Central Khilafat Committee. Founder and Secretary of Khuddam-i-Kaaba Society; Sentenced to two years' rigorous imprisonment, Nov. 1921.

ALWAR, COLONEL H. H. RAJ RAJESHWAR SRI SEWAI MAHARAJ SIR JEY SINGH VEERENDRA SHIROMANI DEV, G.C.I.E. (1919);

K.C.I.E. (1911); K.C.S.I. (1909); Maharaj of; Lt.-Col. in British Army, 1915; Col. in 1918. *b.* 1882; *s.* father, 1892. *Address:* The Palace, Alwar, Rajputana.

ANDERSON, ERIC OSWALD, C.B.E. (1919), General Manager, Bulloch Bros. & Co., Ltd., Rangoon. *b.* 24 July 1870. *Educ.:* Aldenham School, Herts. *Address:* Rangoon.

ANDERSON, GEORGE, C.I.E. (1920), M.A. (Oxon.) Director of Public Instruction, Punjab, since 1920. *b.* 15 May 1876; *m.* to Gladys Alice Morony. *Educ.:* Winchester College, University College, Oxford. Transvaal Educational Department, 1902-1910; Indian Educational Service; Professor of History, Elphinstone College, Bombay; Assistant Secretary, Department of Education, Government of India; Secretary, Calcutta University Commission, 1918-19. *Publications:* The Expansion of British India; British Administration in India; Short History of the British Empire. *Address:* Grant Lodge, Simla.

ANKLIKER, LT.-COL. AMIR-UL-UMRA SARDAR SIR APPAJIRAO SAHIB SITOLE, SENA HARDOO, SAH-SIBI, K. B. E. (1919); C.I.E. (1913); Member of the Gwalior Government in Department of Revenue and Agriculture since 1918. *b.* 1874. *Educ.:* Belgaon. Pte. Secretary to the Maharajah of Gwalior, 1897. *m.* the youngest daughter of the late Maharajah Jijajirao Sahib Scindia of Gwalior. *Address:* Gwalior.

ANNANDALE, (THOMAS) NELSON, B.A. (Oxon.), D.Sc. (Edin.), F.L.S.; corresponding member of the Zoological Society of London, Director of the Zoological Survey of India, 1916; Superintendent of the Indian Museum and Secretary to the Trustees, 1906-16; *e. s.* of late Prof. Thomas Annandale. *Educ.:* Rugby; Edinburgh University; Balliol College, Oxford. *Address:* Indian Museum, Calcutta.

ARCOT, PRINCE OF, SIR GHULAM MAHOMED ALI KHAN BAHADUR, G.C.I.E. (1917); K.C.I.E. (1909). *b.* 22 Feb. 1882; *s.* father, 1903. Premier Mahomedan nobleman of Southern India, being descended from the former Mussulman dynasty of the Nawabs of the Karnatic. *Educ.:* Newington Court of Wards Institution, Madras. Member of Madras Legislative Council, 1901-6; Member of the Imperial Legislative Council (Mahomedan Electorate) of the Madras Presidency, 1910-13; Member of the Madras Legislative Council by nomination, 1916; President, All-India Muslim Association, Lahore; President, South India Islamiah League, Madras. *Address:* Amir Mahal, Madras.

ARDEN-WOOD, WILLIAM HENRY HETON, C.I.E. (1913); M. A. (Oxon.), F.R.G.S.; Hon. Fellow of Calcutta University; Principal of La Martiniere College, Calcutta, since 1892; *b.* 27 Nov. 1858; *e. s.* of late Rev. J. Wood, M.A. (Oxon.), Highfield, Wigan; *m.* 1893, Margaret Louisa, *e. d.* of E. E. Lowis, late B.C.S. *Educ.:* Manchester Grammar School; Christ Church, Oxford. Assistant Master, Grantham Grammar School, 1883-85; La Martiniere, Calcutta, 1885-89; Principal, Victoria College, Cooch Behar, 1889-92; first President, Calcutta University Teachers' Association, 1905; President, Anglo-Indian Association, 1913; Member, Bengal Legislative Council, 1917. *Address:* 11, London Street, Calcutta.

ARMYTAGE, MAJOR VIVIAN BARTLEY GREEN, I.M.S., M.D., M.R.C.P. (Lond.) Chev. of Legion of Honour (1916); Order of White Eagle of Serbia (1917); 1st Resident Surgeon, Presidency General Hospital, Calcutta. *b.* 14 August 1882. *Educ.:* Clifton College, Bristol, London and Paris; Eden Hospital, 1911-14. Served in France and Mesopotamia. *Publications:* Author of 6th Edition, "Diseases and Management of Children in India," "Labour room clinic and aids to midwifery." *Address:* Presidency General Hospital, Calcutta.

ASSAM, BISHOP OF, since 1915, RT. REV. HERBERT PAKENHAM PAKENHAM-WALSH, D.D. (Dub.); *b.* Dublin, 22 March 1871; 3rd son of late Rt. Rev. William Pakenham Walsh, Bishop of Ossory, and Clara Jane Ridley; *m.* 1916, Clara Ridley, *y. d.* of Rev. F. C. Hayes. *Educ.:* Chard Grammar School; Birkenhead School; Trinity College, Dublin; Deacon, 1896; worked as a member of the Dublin University Brotherhood, Chhota Nagpore, India, 1896-1903; Principal, S. P. C. College, Trichinopoly, 1904-07; Head of the S. P. G. Brotherhood, Trichinopoly, Warden, Bishop Cotton School, Bangalore, 1907-14. *Publications:* Evolution and Christianity, (C.L.S.), Commentary on St. John's Ep. (S.P.C.K.), Daily Services for Schools and Colleges, (Longman's), and Divine Healing (S.P.C.K.), *Address:* Shillong, Assam.

ASTON, ARTHUR HENRY SOUTHCOTE, M.A. (Oxon.); Chief Presidency Magistrate and Revenue Judge, Bombay; *b.* 4 July 1874; *m.* to Lilian, *d.* of the late Col. A. R. Savile. *Educ.:* Harrow School, Balliol College, Oxford. Joined Lincoln's Inn; called to the Bar; practised as a Barrister, Bombay High Court, 1902; Public Prosecutor in Sind, 1906; Chief Presidency Magistrate, Bombay, 1906; Acting Additional Judicial Commissioner in Sind, 1920-21. *Publications:* Joint Editor, Starling's Indian Criminal Law (8th Edition); Editor (9th Edition). *Address:* Judicial Commissioner's Bungalow, Karachi.

AYLING, SIR WILLIAM BOCK, KT. (1915); Judge of the High Court of Judicature, Madras, since 1912; *b.* 30 August 1867; *s.* of Frederick William Ayling; *m.* 1894, Emma Annie Graham (*d.* 1912); *Educ.:* Weymouth College; Magdalene College, Cambridge. Entered I.C.S., 1886. *Address:* Madras.

AYYAR, TIRUCHANDARAN VAIDYANATHA SESHAGIRI, B.A., B.L., Member, Legislative Assembly. *b.* September 1860. *Educ:* at Trichinopoly and Madras. Vakil, High Court, Law Professor, Mem. of Senate for 20 years, Judge, High Court (retired 1920). President of numerous institutions in Madras connected with Social Service; represented Madras Univ. on the local Legislative Council for 5 years before 1913. *Address:* Goverdhan, Kilpauk, Madras.

AZIZ-UD-DIN, MUNSHI, C.I.E., 1909; C.V.O., 1911; Deputy Commissioner, Berar; Acting Hon. A. D. C. to King George during Indian tour when Prince of Wales. *Address:* Berar.

BABER, SHUM SHERE JANG BAHADOOR RANA, General of the Nepalese Army, G.B.E.; (Hon.Mil.) *cr.* 1920; K.C.S.I. (Hon.) *cr.* 1919; K.C.I.E. (Hon.) *cr.* 1916; *b.* 27 January 1888; 2nd *s.* of Maharaja Sir Chandra of Nepal; *m.* 1903, Deva Vakta Lakshmi Devi; 2 *s.* 2 *d.* Director-General, Police Forces, Katmandu, since 1903; was present at the Delhi Coronation Durbar, 1903; visited Europe, 1908; was in charge of shooting arrangements during King George's shoot in Nepal Terai, 1911; attached to the Army Headquarters, India (March 1915 to February 1919) as Inspector General of Nepalese Contingents in India during the Great War (Despatches, specially; thanks of Commanders-in-Chief in India; K.C.S.I., K.C.I.E., for Meritorious Service; received the 1st class Order of the Star of Nepal with the title of Supradipta Manyabara, 1918; the thanks of the Nepalese Government and a Sword of Honour); Waziristan Field Force, 1917 (Despatches; special mention by Commander-in-Chief in India; the Nepalese Military decoration for bravery); at Army Headquarters, India: as Inspector General of Nepalese Contingent during Afghan War, 1919; (Despatches; G. B. E.) In memory of his son Bala Shum Shere supplied (1921) Pokhara, a hill-station in Nepal, with pipe drinking water at a cost of over Rs. 1,00,000. *Address:* Singha Durbar and Baber Mahal, Katmandu, Nepal, *via* India.

BAGCHI, SATISCHANDRA, B.A., LL.D., Bar-at-Law; Principal, University Law College, Calcutta; *b.* Jan. 1882; *Educ.:* Santipur Municipal School, Calcutta; St. John's College, Cambridge, B.A., Calcutta University, 1901; B.A., LL.B., Cambridge and Dublin; LL.D., Trinity College, Dublin, 1907; Fellow, Calcutta University, 1909; Tagore Professor of Law, 1915; called to Bar, Gray's Inn, 1907. *Address:* Principal's Quarters, Darbhanga Buildings, University Law College, Calcutta.

BAIG, SIR ABBAS ALI, K.C.I.E., (1917) C.S.I., B.A., LL.D. *m.* 1st Ayesha, *d.* of Shaikh Mira of Wai (*died*); 2nd 1901, Allia, *d.* of Shaikh Ali Abdulla. *Educ:* Wilson College, Joined Statutory C.S. 1882 as Dy. Educational Inspector, Hindustani Schools, Bombay Presidency; Dewan, Janjira State, March 1886 to March 1890; admitted to the Statutory Civil Service 1890; Asstt. Coll. and Magte., 1890-92; on special duty in the Junagadh State, January to April 1893; offd. as 4th Presidency Magte., April 1893; appointed Oriental Translator to Government, June 1893; Reporter on the Native Press; Registrar of Indian Publications; Secretary, Civil and Mil. Examination Boards, 1894-1906; appointed Dewan of Junagadh State, July 1906 to 1910; Talukdari Settlement Officer, July 1906; Member of Council of State for India, June 1910-17; LL.D., Glasgow, 1912; Commissioner of Income-tax, 1915-17; Represented Bombay Univ. at the Congress of Universities of Empire, 1912; on Special Political duty in Egypt in connection with the war, 1914-15; Vice-President, Council of India, 1916-17.

BAJPAI, PANDIT SANKATA PRASADA, Rao Bahadur, B.A., Zemindar and Banker, *b.* Nov. 18, 1887. *m.* Shrimati Sumitra Devi. *Educ.* Canning College, Lucknow, Ewing Christian College, Allahabad and University School of Law, Allahabad. Elected Member, Benares Hindu University in 1917; Elected Hon. Secy., Kheri Dist. Board, 1918; Appointed Hon. Magistrate, 1918; Chairman, Lakhimpur Municipality, 1919; and Elected Member of the Imperial Legislative Assembly, 1920. *Address:* Lakhimpore, Kheri, (Oudh).

BALRAMPUR, MAHARAJA BAHADUR OF, SIR BHAGWATI PRASAD SINGH, K.C.I.E.; Member of the Legislative Council of the U.P. of Agra and Oudh; Hon. Fellow of the University of Allahabad for life; Chairman, Municipal Board, Balrampur; Special Magistrate; *b.* 10th July 1879; S. 1893. *Address:* District Gonda, Oudh.

BANATVALA, COL. SIR HORMASJEE EDULJEE, C.S.I., 1917; I.M.S., Inspector-General of Civil Hospitals, since 1914; Member of Council of Chief Commissioner, Assam First Commission, 1884; military duty until 1893; served Burma, 1886-89; Lusha Expedition, 1882. *Address:* Shillong, Assam

BANERJEE, SIR SURENDRANATH, KT. (1921); Minister (Local Self-Govt.), Govt. of Bengal, 1921; *b.* 10 November 1848; *m.* 1867. *Educ.:* Doveton College, Calcutta; University College, London. Entered I.C.S. 1871; left the service 1874; Professor of English Literature, Metropolitan Institution of Calcutta, 1875; founded Indian Association, 1876; founded Ripon College, Calcutta, 1882; was twice President of the Indian National Congress; Presdt. of the first Moderate Confce. held in Bombay, 1919; for eight successive years a Member of the Bengal Legislative Council; again elected 1913; Member of the Imperial Legislative Council, 1913. For many years Editor of the "Bengalee" *Address:* The Secretariat, Calcutta.

BANERJEE, MAHENDRANATH, C.I.E. (1921) M.R.C.S. (England), L.S.A. (London), Princ. Carmichael Medical Coll., Calcutta, since 1916 *b.* Sept. 1856. *Educ.* Presy. Coll., St. Xavier's Coll. and Medical Coll., Calcutta; Edinburgh Univ. and King's Coll., London. Resident Medical Officer, R. Free Hospital London, 1883-85; Lecturer of Medicine Calcutta Med. Sch., 1890-1915; Additional member, Imp. Leg. Council, 1916; Member of the State Med. Faculty of Bengal; Fellow of Calcutta Univ.; Member of Sanitary Conference, Simla, 1919. *Address:* 32, Theatre Road, Calcutta.

BANERJI, ALBION RAJKUMAR, I.C.S., C.S.I (1921), C.I.E., 1912; *b.* Bristol, 10 Oct. 1871 *m.* 1898, *d.* of Sir Krishna Gupta. *Educ.* Calcutta University; Balliol College, Oxford M.A., 1892. Entered I.C.S., 1895; served a district officer in the Madras Presidency Diwan to H. H. the Maharaja of Cochin 1907-14; reverted to British service, 1915

Collector and District Magistrate, Cuddapah; services placed at the disposal of Government of India Foreign Department for employment as Member of the Executive Council of H. H. the Maharaja of Mysore, March 1916. *Address:* Bangalore.

BAPTISTA, JOSEPH, BAR-AT-LAW; *b.* 17 March, 1864. *Educ.:* St. Mary's School, Bombay; Coll. of Science, Poona; Cambridge University. L.C.E. (Bom.), B.A. and LL.B. (Cantab.): has taken a prominent part in the Indian labour movement. *Publication:* Lectures on Roman Law, Government Law School, Bombay. *Address:* Matharpacady, Bombay.

BARBER, CHARLES ALFRED, Sc. D. (Cantab.), F.L.S., Sugarcane Expert for India; *b.* Wynberg, South Africa, 1860; *s.* of Rev. Wm. Barber; *m.* Edith Leather, *d.* of Rev. G. R. Osborne; one *s.* one *d. Educ.:* Kingswood School, Bath; Bonn University; Christ's College, Cambridge (Scholar). Demonstrator and Lecturer at University College, London and Cambridge University; Superintendent of Agriculture, Leeward Islands; Professor of Botany, R.I.E. College, Cooper's Hill, Government Botanist, Madras. *Address:* Agricultural College, Coimbatore, S. India.

BARIA, CAPTAIN (HON.) HIS HIGHNESS MAHARWAL SHRI RANGITSINHJI, RAJA OF; K.C.S.I. 1922); *b.* 10 July 1886; one *s.* one *d. Educ.:* Rajkumar College, Rajkot; Imperial Cadet Corps, Dehra Dun, and in England. Served in European War, 1914-15 and in the Afghan War, 1919. *Address:* Devgad Baria, *via* Piplod (B. B. & C. I. Ry.), Bombay.

BARNARDO, LT.-COL. FREDERICK ADOLPHUS FLEMING, M.A., B.Sc., M.B., 1899; F.R.C.S., M.R.C.P. (Edin.); C.B.E. (1919); C.I.E., Civil Surgeon, Simla. *b.* June 4, 1874; *m.* to Violet Kathleen Ann, 2nd daughter of the late Henry Teviot-Kerr, seventh son of the late Rev. Lord Henry Frances Teviot-Kerr; *Educ.:* Edinburgh University. Served with the Fife and Forfar Light Horse Imperial Yeomanry in South Africa, 1899-1902; entered Indian Medical Service, 1902; Somaliland Campaign, 1903-04; Asst. Director of Medical Services, Embarkation Staff, Bombay, during the Great War. *Publications:* Many contributions to Medical publications, and the following monographs:—Surgical Shock Intestinal Stasta. The causation of the Onset of Labour, etc. *Address:* Simla.

BARNES, HERBERT CHARLES, C.I.E. (1919); Indian Civil Service. *b.* 30 May 1870. *Educ.:* Westminster School, Christ Church, Oxford M.A. *Address:* Silchar, Cachar.

BARODA, H.H. MAHARAJA GAEKWAR SIR SAYAJI RAO III., G.C.S.I. (1881); G.C.I.E. (1919); *b.* 10 March, 1863; *m.* 1st., 1881, Chimnabai Maharani: 2nd, 1885, Chimnabai Maharani II., C.I.; two *s.* one *d. Educ.:* Maharaja's School, Baroda. Succeeded, 1875. Invested with powers, 1881. *Address:* Baroda.

BARRATT, MAJOR-GENERAL WILLIAM CROSS, C.B., 1911; D.S.O.; Indian Army; Commdg. 16th Indian Division; *b.* 2 June, 1862; 3rd *s.* of late James Barratt, of Hanslope, Bucks *m.* 1907, Katherine Mathilde Goldsmith, formerly of Betton Hall, Market Drayton. *Educ.:* Bedford Grammar School. Entered Army 1883, Served Soudan Expedition, 1885; Zhob Valley Expedition, 1890; Waziristan, 1894-95; East Africa, 1896; Uganda, 1897-98; China, 1901; N. W. Frontier, India; Darwesh Khel Wazirs Expedition. *Address:* Lahore Cantonment.

BARRON, CLAUD ALEXANDER, C.S.I. (1921); C.I.E. (1911), F.R.G.S., Chief Commissioner, Delhi, since 1918; *b.* 22 December, 1871; *s.* of Col. W. Barron, B.S.C.; *m.* 1912, Ida Mary, *e. d.*, of Major-General Sir R.H. Ewart, K.C.M.G., C.B. one *s. Educ.:* Grammar School and University, Aberdeen; Clare College, Cambridge. Entered I.C.S., 1890; Chief Secretary, Punjab Government 1912-16. *Address:* Delhi.

BARROW, Lieut-General, Sir George de Symons, K.C.B, cr. 1919; K.C.M.G., cr. 1918; C.B., 1915; G.O.C, Peshawar District; *b.* 25 October 1864; *m.* 1902, Sybilia, *d.* of late Colonel G. Way, C.B. Entered Army, Connaught Rangers, 1884; Indian Staff Corps, 1886; D.A.Q.M.G., India, 1903; D.A.A.G., Staff College, 1908; General Staff Officer, 1914; served Waziristan, 1894-5; China, 1900 (medal with clasp); European War, 1914-18 (despatches C. B., promoted Maj.-General), including capture of Jerusalem (K.C. M.G., K.C.B.); Commander Legion of Honour, 1917. Order of the Nile, 1918. *Address:* Peshawar.

BARTHE, RT. REV. JEAN MARIE; Bishop of Paralais since 1914; *b.* Lesignan, Tarbes, 1849. *Educ.:* St. Pe. Seminary. Bishop of Trichinopoly, 1890-1914. *Address:* Shembaganur, Madras Presidency.

BARUA, RAI BAHADUR DEVICHARAN, B.A., B.L., M.L.A., Tea Planter. *b.* 1864. *Educ.:* City College, Presidency College and the General Assembly's Institution, Calcutta. Joined the Bar in 1888 and taking to tea plantation and having acquired 3 tea gardens at Jorhat; retired from the Bar in 1917; Secretary, Jorhat Sarvajanik Sabha for nearly 17 years since 1890; Elected member of the Indian Legislative Assembly, 1921; Hon. Magistrate, Jorhat Bench. *Address:* Jorhat. Assam.

BASU, SIR KAILAS CHUNDER, RAI BAHADUR, KT., *cr.* 1916, C.I.E., 1910; Kaiser-i-Hind, 1909; O.B.E. *b.* Decr. 26, 1850. *Educ.:* Calcutta Training Academy, Calcutta University and Medical College. Fellow, Calcutta University; Vice-President, Indian Medical Congress; Fellow, R. Institute of Public Health; Member, British Medical Association; Member of the Corporation of Calcutta and Hon. Presidency Magistrate: connected with many literary and scientific Societies of India and England and most of his Contributions to the Medical Journals have been reproduced in the English and American Press. 2nd *s.* of late Babu Madhusan Basu *Address:* 1, Sukea Street, Calcutta.

BEACHCROFT, HON. MR. JUSTICE CHARLES PORTEN; Puisne Judge, High Court, Calcutta, since 1915; *b.* 13 March 1871; 4th son of late Francis Porten Beachcroft, Bengal Civil Service; *m.* Elizabeth, *d.* of late

A. E. Ryles. *Educ.:* Rugby; Clare College. Cambridge. Passed Indian Civil Service, 1890; Assistant Magistrate and Collector, Bengal, 1892; Officiating District and Sessions Judge, 1900; District and Sessions Judge, 1906; Officiating Judge, High Court, Calcutta, 1912. *Address:* 4, Little Russell Street, Calcutta.

BEADON, LT.-COL. HENRY CECIL, C.I.E. (1919) Chief Commissioner, Andaman and Nicobar Islands. *b.* 28 November 1869; *m.* 1st Marion A. 2nd Dorothy A. Brown, both being daughters of H. E. Brown of Barton Hall, S. Devon. *Educ:* Cheltenham, Military employ, 1890-95, since when in Civil employ. *Address:* Port Blair, Andamans.

BEDI, SIR BABA GURBUKSH SINGH, KT., *cr.* 1916; C.I.E., 1911; Hon. Extra Asst. Commissioner in the Punjab. *b.* 1861; A Fellow of the Punjab and Hindu Universities; was a delegate to the Indo-Afghan Peace Conference in 1919. *Address:* Kallar, Punjab.

BEER BIKRAM SINGH, RAJKUMAR, HON. LT.-COL., C.I.E.; A. D. C. to the Viceroy, 1906; Officer Commanding Sirmour Imperial Service Sappers and Miners; also attached to 1st P.W.O. Sappers and Miners. Served in the Tirah Expedition, 1897-98. *Address:* Sirmour State, Punjab.

BELL, CHARLES ALFRED, C.M.G., 1915; C.I.E., 1918; I.C.S.; Political Officer in Sikkim; *b.* 31 October, 1870; *e.* surv. *s.* of Henry Bell, I.C.S., and Anne, *d.* of George Dumbell, banker, of Douglas, Isle of Man; *m.* Cashie Kerr, *d.* of David Fernie, shipowner of Warrenside, Blundellsands, Lancashire; one *s.* two *d. Educ.:* Winchester; New College, Oxford. Joined Bengal Civil Service, 1891; conducted exploratory Mission in Bhutan in 1904, and political mission to that country in 1910, concluding a treaty, by which the foreign relations of Bhutan were placed under the British Government; on political duty in Tibet, Bhutan and Sikkim in 1904-05, 1906, and with a few intermissions from 1908-1921; was employed on the Tibet Conference between Great Britain, China, and Tibet, 1913-14, visited Lhasa in 1920-1921. *Publications:* "Grammar of Colloquial Tibetan" and "English-Tibetan Colloquial Dictionary." *Address:* Gangtok, Sikkim.

BELL, SIR NICHOLAS DODD BEATSON, K.C.S.I (1921); K.C.I.E. (1919); C.I.E. (1915); *b.* 19 June, 1867. *Educ.:* Edinburgh Academy and Balliol College, Oxford. *m.* Jeanne Arbuthnott, daughter of John Campbell Arbuthnott, C.I.E. (I.C.S., Assam). Entered the I.C.S. and served in Bengal, E. Bengal and Assam, and Assam. *Address:* Shillong.

BELL, ROBERT DUNCAN, C.I.E. (1919); Director of Industries, Bombay Presidency; *b.* 8 May, 1878. *Educ.:* Heriot's School, Edinburgh, and Edinburgh University, *m.* Jessie, *d.* of D. Spence, Esq. Appointed, I.C.S. Bombay, 1902. Secretary, Indian Industrial Commission, 1916-17, Controller, Industrial Intelligence, 1917-18; Controller, Oils and Paints, 1918-19. *Address:* C/o. Grindlay & Co., Bombay.

BENARES, H. H. SIR PRABHU NARAYAN SINGH, MAHARAJA BAHADUR OF, LT.-COL.; G.C.I.E. (1898), G.C.S.I. (1921); *b.* 26 November 1855, *S.* uncle 1889. *Address:* Ramnagar, Benares State.

BENN, LT.-COL. ROBERT ARTHUR EDWARD, C.I.E., 1904, F.R.G.S.; Indian Army; Resident at Jaipur, Rajputana, since 1915; *b.* 4 February, 1867; *e. s.* of late Charles Edward Benn; *m.* 1898, Edith Annie Fraser, 3rd *d.* of late Maj.-Gen. Neville Parker (retired), Bengal Army; one *s.* one *d. Educ.*. Merchant Taylor's School, Great Crosby; Heidelberg Coll., Germany; R M.C. Sandhurst. Entered Army, 1887; Appointed to the Indian Political Department, 1895; *Address:* Jaipur, Rajputana.

BENZIGER, RT. REV. ALOYSIUS MARY, O.C.D., Bishop of Quilon since 1905; *b.* Einsoedeln, Switzerland, 1864. *Educ.:* Frankfort; Brussels; Downside. Came to India, 1890; Bishop of Tabar, 1900; *Address:* Bishop's House, Quilon, Madras.

BESANT, ANNIE; President, Theosophica Society and of National Home Rule League, author and lecturer on religious, philosophical, political, and scientific subjects; *b.* 1 October 1847; *d* of William Page Wood and Emily, *d.* of James Morris; *m.* 1867, Rev. Frank Besant (*d.* 1917), Vicar of Sibsey, Lincolnshire; legally separated from him, 1873; one *s* one *d Educ* : privately in England, Germany, France; Joined the National Secular Society, 1874; worked in the Free Thought and Radical Movements led by Charles Bradlaugh, M.P.; was co-editor with him of the National Reformer, Member of the Fabian Society, Member of the London School Board, 1887-90; Joined the Theosophical Society in 1889; became a pupil of Mme. Blavatsky; elected its President in 1907. Founded 1898 the Central Hindu College at Benares; 1904, the Central Hindu Girls' School, Benares; is on Court Council and Senate of Benares Hindu Univ., and on Council and Senate of the National University; Elected President of the Indian National Congress, 1917-18: Editor of *The Theosophist*, monthly; *The Adyar Bulletin*, monthly and Editor of *New India*, Daily and weekly. *Address*: Adyar, Madras

BEVILLE, THE HON'BLE LT.-COL. FRANCIS GRANVILLE, C.S.I. (1921), C.I.E., 1908; Agent to the Governor-General in Central India, since November 1919; *b.* 24 March 1867, Lieut., N. Staffs. Regiment, 1886; Indian Staff Corps, 1888; Captain, Indian Army, 1897; Major, 1904; Lt.-Col., 1912; Political Agent, Muscat, 1896-97; Cant. Magte., Nasirabad, 1897-98; Asstt. to A.G.G., Rajputana, and Asstt. Commissioner, Merwara, 1898-99; Political Agent in Bundelkhand, 1900-1904; Bhopawar (now Southern C. I. States), 1905-1912. Baghelkhand; 1916-17; on Special duty in C. I. from 2nd June to 31st July 1912; and from 1st March to 8th April 1914, Resident at Gwalior, 1914; on special duty in C. I. from 20th December 1914 to 18th February 1916; and from 30th October 1917 to 6th April 1919. *Address*: Indore.

BHABHA, HORMASJI JEHANGIR. *b.* 27 June, 1852. *Educ.:* Elphinstone College and in England. Senr. Fellow, Elphinstone College,

1874-76; Vice-Principal and Professor of Logic and Ethics, Central College, Bangalore, 1876; Principal, Maharaja's College, Mysore, 1884; Education Secretary to Government, Mysore, 1890; Inspector-General, Education, Mysore, 1895-1909. *Publications:* Special Report on Manual Training in Schools of General Education; Munir-ul-Talim (Mysore), 1909; Panchayat Committee's report on the education of Parsi boys, 1920. *Address:* 31, Pedder Road, Bombay.

BHAGWATI PRASADH SINGH, MAHARAJA Sir, OF BALARAMPUR, K.C.I.E., *Cr.* 1906; S. 1896. *Address:* Gonda, Oudh, India.

BHANDARKAR, SIR RAMKRISHNA GOPAL, K.C.I.E. (1911); C.I.E. (1889); M.A., Hon. LL.D., Bombay and Edinburgh; Hon. Ph. D., Calcutta; Professor of Oriental Languages, Deccan College, Poona, 1882-93; *b.* 1837; *m.* two *s.* one *d. Educ.:* Ratnagiri Government English School; Elphinstone College, Bombay, 1847-58. Headmaster of High Schools, 1864-68; Professor of Sanskrit, Elphinstone College, Bombay, 1869-1881; Fellow, and for two years Vice-Chancellor of Bombay University; Fellow of Calcutta University nominated to membership of Viceroy's Legislative Council in connection with Lord Curzon's Educational Reforms, 1903; Member of Bombay Legislative Council, 1904-08; a leader of Hindu social and religious reform movements; Dakshina Fellow, 1859-64. *Publications*: First and Second Books of Sanskrit; Early History of the Deccan; Sanskrit and the Derived languages; article on Vaisnavism, Saivism and minor religious systems, in the Encyclopaedia of Indo-Aryan Research; edited Bhavabhuti's Malati-Madhava and has written six reports on Sanskrit MSS, philological and antiquarian articles and essays in the Transactions of learned societies. *Address:* Poona.

BHARATPUR, MAHARAJA OF, H. H. SRI MAHARAJA BRAJANDRA SAWAI KISHNA SINGH BAHADUR JUNG; *b.* 4 October 1899; *s.* of Maharaja Ram Singh; *n.* sis. of H. H. the Raja of Faridkot. *Educ.:* Mayo College, Ajmere; and Wellington. *Address:* Bharatpur, Rajputna.

BHATAWADEKAR, SIR BALCHANDRA KRISHNA, KT., (1900); L.M.; J.P.; Medical Practitioner, Bombay, since 1885; *b.* 19 Feb. 1852; *s.* of Krishna Shastri Bhatawadekar and Rakhmabai; *m.* Savitribai; three *s.* two *d. Educ.:* Elphinstone High School; Grant Medical College, Bombay. Additional Member of Legislative Council, 1897-1899; Legislative Council, 1901; Member of the Improvement Trust; President of the Indian Temperance Association and of the Temperance Council, President of the 14th Bombay Provincial Conference, 1907; Syndic in Medicine, 1912-13 *Address:* Girgaon, Bombay.

BHAVNAGAR, H. H. MAHARAJA KRISHNA KUMAR SINHJI, MAHARAJA OF; *b.* 19th May 1912, *s.* father (Lt.-Col. H. H. Maharaja Sir Bhavsinhji Takhtasinhji, K.C.S.I.), July 1919. *Address:* Bhavnagar, Kathiawar.

BHOPAL, H.H. NAWAB SULTAN JEHAN BEGUM, BEGUM OF C.I., *cr.* 1911; G.C.S.I., *cr.* 1910; G.C.I.E., *cr.* 1904, G.B.E., *cr.* 1918, *b.* 9 July 1858; *s.* mother (H. H. Nawab Shah Jehan Begum, G.C.S.I., C.I., 1901; *m.* 1874, Ahmed Ali Khan, three *s.* Eighth in lineal descent from the famous Dost Mahomed Khan, founder of the dynasty. *Address:* Bhopal, Central India.

BHURGRI, THE HON. MR. GHULAM MAHOMED KHAN, Member of the Council of State. *b.* 1881. *Educ.* M.A.O. Coll., Aligarh. Bar-at-law, Lincoln's Inn. Zemindar. *Address:* Hyderabad, Sind.

BIKANER, MAHARAJAH OF, MAJOR-GENERAL H. H. MAHARAJAH DHIRAJ RAJ RAJESHWAR NARENDRA SHIROMANI SRI SIR GANGA SINGHJI BAHADUR, G.C.S.I., *cr.* 1911; G.C.I.E., *cr.* 1907; (K.C.S.I., *cr.* 1904; K.C.I.E., *cr.* 1901;) C.C.V.O., *cr.* 1919, G.B.E (Military Division), 1921; K.C.B., *cr* 1918; A.-D.-C.; Grand Cordon of the Order of the Nile, *cr.* 1918; Hon. LL.D., Cambridge and Edinburgh; Donat of the Order of St. John of Jerusalem in England; Son of Maharaj Sri Lall Singhji Bahadur and adopted Son of his own elder Brother His late Highness Maharajah Sri Dungar Singhji Bahadur; born 3 October, 1880; educated at the Mayo College, Ajmer, *m.* 1897; is one of the Ruling Princes of India (succeeded 31st August 1887) and is entitled to a salute of 19 guns. Two sons. One daughter. Invested with full ruling powers, 1898, granted Hon. Commission of Major in the British Army, 1900, and attached to 2nd Bengal Lancers; promoted Lt.-Col., 1909; Col., 1910; Major-General, 1917; served with British Army in China in command of Bikaner Camel Corps, 1901, (medal, despatches, K.C.I.E.); served European War, 1914-15 in France and in Egypt (despatches France and Egypt, K.C.B., Major-General, 1914 Bronze Star Grand Cordon of the Order of the Nile) G.B.E. (Military Division). Awarded gold medal (1st Class) of Kaiser-i-Hind for public service in India during Great Famine of 1899-1900; attended the Coronation of King Edward VII, 1902, and of King George V, 1911; Hon. A.-D.-C. to H. R. H. the Prince of Wales, 1902; A.-D.-C. to H. I. M. the King Emperor since 1910. Was selected as one of the three Representatives of India at the Imperial War Cabinet and Conference, 1917. Received the Freedom of the Cities of London, Edinburgh, Manchester and Bristol. Was selected again as one of the two Representatives of India at the Imperial War Cabinet and the Peace Conference, 1919. Elected Chancellor of the Chamber of Princes, 1921. Is a Patron of the Benares Hindu University and Sri Bharat Dharm Mahamandal, Benares, a Vice-President of the East Indian Association, London; the Royal Colonial Institute, London; the Indian Gymkhana Club, London; the Indian Army Temperance Association, Simla; a member of the General Council of the Mayo College, Ajmer, and of the Managing Committee, Mayo College; General Council, Daly Coll., Indore; Is a Freemason, Past Master of Lodge "Rajputana," Abu; a Dy. Dist. Grand Master of the Dist. Grand Lodge, Bombay; Founder and Scribe E of the Royal Arch Chapter "Sir Ganga Singh," Abu;

Mem. of Royal Arch Chapter Ajmer and the Phulkian Lodge, Patiala. *Heir-Apparent:* Captain Maharaj Kumar Sri Sadul Singhji Bahadur, *b.* 17 September 1902, second son Maharaj Sri Bijey Singhji Bahadur, *b.* 29 March 1909. *Address:* Bikaner, Rajputana.

BILGRAMI, SYED HOSSAIN, NAWAB, IMADUL MULK, BAHADUR, C.S.I., 1908; *b.* Gya, 18 October, 1842; *s.* of Syed Zainuddin Hossain Khan Bahadur of the Uncovenanted Civil Service, Bengal; *m.* 1st, 1864, wife died 1897; *m.* 2nd, Edith Boardman, L.S.A., (Lond.), M.D.; four *s.* one *d. Educ.:* Presidency College, Calcutta. Professor of Arabic, Canning College, Lucknow, 1866-73; Private Secretary to H. E. Sir Salar Jung till his death; Private Secretary to H. H. the Nizam; Director of Public Instruction of H. H. the Nizam's Dominions; Member of the Legislative Council, Member of the Universities Commission, 1901-2; retired 1907; Member of Council of Secretary of State for India, 1907-09 *Publications:* Life of Sir Salar Jung; Lectures and addresses; (in collaboration) Historical and Descriptive Sketch of His Highness the Nizam's Dominions, 2 vols *Address:* "Rocklands," Saifabad, Hyderabad. Deccan.

BILIMORIA, ARDASHIR JAMSETJEE, B.A., J.P., Director, Tata Sons, Ltd. *b.* 18 September 1864. *Educ.:* Chandanwady High School and Elphinstone College, Bombay. Joined Messrs. Tata, in 1884. *Address:* Taj Mahal Hotel, Bombay.

BINGLEY, MAJOR-GENERAL ALFRED HORSFORD, C.B., 1915; C.I.E., 1909; *b.* 28 May 1865; *s.* of late Peregrine Taylor Bingley; *m.* 1893, Mabel, *e.d.* of late Col. G. A. Way, C.B.; one *d. Educ.:* Kensington School, R.M.C., Sandhurst. Lieut., Leinster Regiment, 1885; Captain, Indian Army, 1896; Deputy Adjutant-General, Headquarters Staff, India, 1914; Sec., Army Department, Government of India, 1916; served in Burma, 1891-92, and in China, 1900; Gold Medal United Services Institution of India, 1896. *Publications:* Series of Handbooks on the Classes recruited in the Indian Army. *Address:* Simla.

BINNING, SIR ARTHUR WILLIAM, KT. (1916), Merchant in Rangoon; *b.* 5 August 1861; *s.* of Robert Binning, Glasgow; unmarried. *Educ:* Glasgow Academy. *Address:* Rangoon. Burma.

BIRDWOOD, GENERAL SIR WILLIAM RIDDELL, 1st Bt., *cr.* 1919; G.C.M.G. *cr.* 1919; K.C.B., *cr.* 1917; K.C.S.I., *cr.* 1915; K.C.M.G., *cr.* 1914; C.B., 1911; A.D.C. General; C.I.E., 1908; D.S.O., 1908; Commanding in Chief, Northern Command, since November 1920. *b.* 13 Sept. 1865; *e.* surv. *s.* of late H. M. Birdwood, C.S.I., M.A., LL.D. (Cantab), late Judge of High Court and Member of Council, Bombay; I.C.S.; *m.* 1894, Jeannette Hope Gonville, *e.d.* of Col. Sir B. P. Bromhead, C.B., 4th Bart., of Thurlby Hall, Lincoln. *Educ.:* Clifton College; R.M.C. Sandhurst. Lieut., 4th Batt. Royal Scots Fusiliers, 1883; 12th Lancers, 1885; 11th Bengal Lancers, 1886; Gen., 1917; Adjutant, Viceroy's Bodyguard, 1893 Brig. Major, S. Africa, 1899; D.A.A.G., S. Africa 1900; Military Secretary to Com.-in-Chief, S. Africa (Lord Kitchener), 1902; A.M.S. and Interpreter to Com.-in-Chief, India, 1902; A.A.G. Headquarters, India, 1904; Military Secretary to Com.-in-Chief, India, 1905; Brigade Commissioner, 1909; Quarter-Master-General in India, 1912; Secry. to Govt. of India, Army Deptt., and Member of Governor General's Legislative Council, 1912-14; G.O.C. Australian Imperial Force, 1915-20; A.D.C. to the King, 1906-11; A.D.C. General to the King, 1917; served Hazara, 1891 (medal with clasp); Isazai, 1892; N. W. Frontier, India, 1897-98 (medal two clasps); Tirah, 1897-98 (despatches, clasp); S. Africa, 1899-1902 (severely wounded), despatches 5 times, brevets of Major and Lieut.-Col., Queen's Medal, 6 clasps, King's medal, two clasps; Chief Staff Officer, Mohmand Expedition, 1908 (despatches, medal and clasp, D.S.O.); served in command of detached landing of Australian and New Zealand Army Corps above Gaba, Tepe, European War, 1914-18 (wounded, despatches, Commander-in-Chief, Mediterranean Expeditionary Force and Commander, Dardanelles Army, 1915-16; Commandant, Australian and New Zealand Army Corps and 9 Australian Forces, France, 1916-18; G.C.M.G.; Grand Officer of the Legion of Honour, Croix de Guerre; Grand Officer of the Crown, Belgium; Croix de Guerre, Belgium); commanded 5th Army France, 1918-19; Colonel, 12th Lancers, 1920; General, Commonwealth of Australia Military Forces, 1920; LL.D., Cambridge, 1919; LL.D., Melbourne (Victoria) and Sydney (N.S.W.), 1920; Fellow, Royal Colonial Institute. *Address.* Rawalpindi.

BIRLEY, LEONARD, C.I.E., 1914; Revenue Secretary to Government of Bengal, since 1915; *b.* 30 May 1875; *s.* of late Arthur Birley; *m.* 1908 Jessie Craig, *d.* of late Maxwell Smith, Hursingpur, Tirhoot, India; one *s.* one *d. Educ.:* Uppingham; New College, Oxford. Entered I.C.S., 1897; Joint Magistrate and Deputy Collector, 1907; Magistrate and Collector, 1911. *Club:* United Service Calcutta.

BLACK, MAJOR-GENERAL WALTER CLARENCE, P.S.C., C.I.E. (1919); Mily. Secretary to A. H. Q. since November, 1919; *b.* 29 January 1867. *Educ.:* Epsom College and R. M. C., Sandhurst. *m.* Miss Hope Gordon Anderson. Derbyshire Regiment, 1888. Transferred to Indian Army, 1890; Regimental service with 12th Pioneers. Commanded Defended Port of Madras, 1917-18. Comdt. first Indian Cadet College. *Address:* Army Head Quarters, India.

BLAIR, ANDREW JAMES FRASER, "Statesman" Editorial staff, Calcutta; Founded the Eastern Bureau, Limited, Calcutta, 1912; late Editor and Managing Director, The Empire, Commerce, The Empire Gazette (daily and weekly newspapers published in Calcutta); *b.* Dingwall, Ross-shire, 30 September, 1872; *y. s.* of late Andrew Blair, Rector, Dingwall Burgh School, and Mary Ann Campbell, *d.* of late Thomas Duff, Glasgow; *m.* 1900, Constance, *e.d.* of Thomas Ibbotson; one *s.* one *d. Educ.:* Glasgow High

School. Engaged in journalism, since 1890. *Address:* 6, Chowringhee, Calcutta.

BLENKINSOPP, EDWARD ROBERT KAYE, C.I.E. (1911); *b.* 15 May 1871; *s.* of Col. Blenkinsopp; *m.* Florence Edith, *d.* of late Sir Stanley Ismay, K.C.S.I., three *s. Educ.:* St. Paul's School; Christ's College, Cambridge Entered I.C.S., 1890; Settlement Officer, 1897; Deputy Commissioner, 1902; Kaiser-i-Hind Medal, 1903; Commissioner of Excise, 1906; Chief Secretary to Chief Commissioner, 1912-13. *Address:* Nagpur, C. P.

BOLTON, HORATIO NORMAN, C.S.I., 1918; C.I.E., 1916; Revenue Commissioner, N. W. Frontier Province; *b.* 1 Feb. 1875; *m.* 1911, Ethel Frances, *d.* of late Captain J. C. H. Mansfield, Castle Wray, Co. Donegal; *Educ.:* Rossall; Corpus Christi College, Oxford, (B A.); Entered I C S., 1897; Deputy Commissioner, Dera Ismail Khan, 1904; Kohat, 1909; Sessions Judge, Peshawar, 1910-11; Political Agent, Dir. Swat, and Chitral, 1911-12. Deputy Commissioner, Peshawar, 1912. *Address:* Peshawar.

OMBAY, BISHOP OF, since 1908; RT. REV EDWIN JAMES PALMER: *o. s.* of late Archdeacon Palmer of Oxford, and *nephew* of 1st Lord Selborne; *m.* 1912, Hazel, *y. d.* of Col. E. H. Hanning-Lee, Bighton Manor, Alresford. *Educ.:* Winchester and Balliol Coll., Oxford. Ordained, 1896; Fellow, Balliol College, 1891; Tutor, 1893; Chaplain, 1896; Examining Chaplain to Bishop of Southwell, 1899-1904; to Bishop of Rochester, 1904-05; to Bishop of Southwark, 1905-08. *Publication,* The Great Church Awakes (Longmans, Green & Co.). *Address;* Bishop's Lodge, Malabar Hill, Bombay.

BOSE, SIR BIPIN KRISHNA, K.C.I.E. (1920); Kt. *cr.* 1907; C.I.E., 1898; M. A.; Advocate in the Central Provinces *b.* 1851. *Address:* Nagpur, C. P.

BOSE, SIR JAGADIS CHANDRA, Kt. *cr.* 1917; C.I.E., 1903; C.S.I., 1911; M.A. (Cantab.), D. Sc. (Lond.); LL.D., F.R.S., Professor Emeritus of the Presidency College, Calcutta; Founder Director of Bose Research Institute; *b.* 30 Nov. 1858; *Educ.:* Calcutta; Christ's College, Cambridge; Delegate to International Scientific Congress, Paris, 1900; scientific member of deputation to Europe and America, 1907, 1914, and 1919. Published series of papers on Electric waves and other electric phenomena. (Proc. Roy. Society.) *Publications:* Response in the Living and Non-living; Plant Response, Electro-physiology of Plants, Irritability of Plants; Life Movements of Plants, Vols. I and II. *Address:* Bose Institute, Calcutta.

BOURNE, SIR ALFRED GIBBS, K.C.I.E. *cr.* 1913; C.I.E., 1908; F.R.S., F.L.S., C.M.Z.S.; Director of the Indian Institute of Science, Bangalore; *b.* Lowestoft, 8 Aug. 1859; *m.* Emily Tree Glashier, 1888; *Educ.:* University College, School; Royal School of Mines: University College, London; D.Sc. London; Fellow of University College, London; President of the Faculty of Arts in the University of Madras; Assistant to E. Ray Lankester, 1879-85; appointed to Madras, 1885; Registrar of the Univ. of Madras, 1891-1899; Director of Public Instruction, Madras, Commissioner for Government Examinations and Additional Member of the Council of Fort St. George, 1903-14. *Address:* Hebbal, Bangalore.

BRADSHAW, WILLIAM JOHN, C.I.E. (1919), V.D., Managing Director, Messrs. Walter Locke & Co, Calcutta. *b.* 20 June 1864. *Educ.:* Birmingham. *m.* Salome, *d* of A. C. Blake, of Nailsworth; Member, Calcutta Corporation, 1896 to 1904 and 1906-1909; Calcutta Port Commissioner, 1907-08; Bengal Leg. Council, 1910-12; Deputy Dist. Grand Master, Bengal, 1920-21; and Mem. of National Council, Y.W.C.A., 1920. *Address:* 4, Esplanade Road, Calcutta.

BRAITHWAITE, LT.-GENERAL SIR WALTER PIPON, K.C.B., *cr.* 1918; Commanding-in-Chief, Western Command, since Jan. 1921. *b.* 11 Nov. 1865; *s.* of late Rev. W. Braithwaite and Laura, *d.* of late Com.-Gen. Pipon, Seigneur of Noirmont, Jersey; *m.* Jessie Adine, *d.* of late Caldwell Ashworth. *Educ:* Bedford; R.M.C. Sandhurst. Entered Army, Somerset L. I., 1886; Lt.-General, 1919, D.A.A.G., S. Africa, 1900-2; D.A.Q.M.G. 2nd Army Corps and Southern Command, 1902-4, General Staff Officer, Southern Command, 1905; General Staff Officer, Staff College, 1906-9; War Office, 1909-11; Commandant, Staff College, Quetta, 1911-14; Chief of General Staff, Mediterranean Expeditionary Force, Mar.-Octr. 1915; commanded 62nd Division, Dec. 1915—Aug. 1918, and subsequently IX Army Corps; served Burma, 1886-87 (despatches, medal with clasp); S. Africa, 1899-1902 (despatches thrice, Brevet-Major, Queen's medal, 6 clasps, King's medal, 2 clasps); European War—Legion d'honneur, Croix de Commandeur, 1915; Grand Officer Ordre de la Couronne, 1919; Croix de Guerre (French) 1918; Croix de Gurre (Belgian), 1919, Despatches 8 times. *Address:* Karachi.

BRAY, DENYS DE SAUMAREZ, C.S.I. (1922); C.B.E., 1919, C.I.E., 1917; I.C.S.; B.A.; Gold Kaisar-i-Hind Medal, 1912; D.C., Kohat. *Educ.:* Blundell's School, Tiverton; Balliol College, Taylorian Scholar, Oxford, 1898. Entered I.C.S., 1898; served in the Punjab, N. W. F. Province, Baluchistan, and with the Govt. of India; Census Superintendent, Baluchistan, 1910; Dy. Secy., Foreign and Political Dept., 1916; Joint Foreign Secy., 1919; *Publication;* Brahui Language, 1909, Life History of a Brahui, 1913, etc. *Address:* Quetta, Baluchistan.

BRAY, SIR EDWARD HUGH. Kt., *cr.* 1917; Senior Partner, Gillanders, Arbuthnot & Co.; President, Bengal Chamber of Commerce; Member of Imperial Legislative Council; Controller of Contracts, Army Headquarters. *b.* 15 Apr. 1874; *m.* 1912, Constance, *d.* of Sir John Graham, 1st Bt. *Educ.:* Charterhouse; Trinity College, Cambridge. *Address:* Gillander House, Calcutta.

BROWN, PERCY, A.R.C.A. 1898; Indian Educational Service, 1899; Principal, Government School of Art, Calcutta, since 1909; *b.* Birmingham, 1872; *m.* 1908, *d.* of Lt.-Col. Sir Adelbert Talbot, K.C.I.E.; *Educ.:* Edward VI Grammar School and School of Art,

Birmingham ; Principal, Mayo School of Art and Curator, Museum, Lahore, 1899-1909 ; on deputation, Assistant Director, Art Exhibition, Delhi Durbar, 1902-03 ; officer-in-charge, Art Section and Trustee, Indian Museum, 1910. *Address:* 28, Chowringhee, Calcutta.

BUCHANAN, SIR GEORGE CUNNINGHAM, K.C.I.E. (1917) ; Kt. Bachelor (1914) ; C.I.E. (1911) ; Consulting Engineer to the Bombay Development Department. Partner in firm of C. S. Meik and Buchanan, 16, Victoria St, Westminster ; *b.* 20 April 1865. *m.* Elizabeth Isabella Mead. Trained for the profession of a Civil Engineer on the works of the River Tyne Improvement Commissioners and other Port and River Works as a pupil of the Chief Engineers. Subsequently employed on Public Works in England, Venezuela, Spain, Canada, Argentine, West Indies ; Chief Engineer, Dundee Harbour Trust (1896-1901) ; Chairman, Rangoon Port Trust (1901-1915) ; Director, Port and River Works, Mesopotamia Expeditionary Force (1915-17) ; Member, Indian Munitions Board, 1917-1918. *Publications:* Professional papers read before the Institution of Civil Engineers and the Royal Society of Arts. *Address:* The Secretariat, Bombay.

BUCK, EDWARD JOHN, O.B.E. (1918) ; C.B.E. (1918) ; Reuter's Agent with Government of India and Director, Associated Press of India ; Vice-Chairman, Alliance Bank of Simla, *b.* 1862. *m.* Annie Margaret, *d.* of General Sir R. M. Jennings, K.C.B. *Educ.:* Hurstpierpoint. Was in business in Australia. Assistant and Joint Secretary, Countess of Dufferin's Fund for 28 years. Honorary Secretary, Executive Committee, "Our day" in India, 1917-18. *Publication:* "Simla, past and present." *Address:* Northbank, Simla.

BUCKLAND, THE HON. MR. JUSTICE PHILIP LINDSAY, Judge, High Court, Calcutta. *Educ.:* Eton and New College, Oxford. *m.* Mary, *d.* of Livingstone Barday. Called to the Bar, Inner Temple, 1896. Practised in High Court, Calcutta. *Publication:* Text Book on the Indian Companies Act, 1913. *Address:* Bengal Club, Calcutta.

BULLARD, COMMISSIONER HENRY, Salvation Army, Northern Territory. Pioneer in Salvation Army work in India ; landed in 1882. Has been in charge of Salvation Army work in Japan and West Indies. *Address:* Ferozepur Road, Lahore.

BUNBURY, MAJOR-GENERAL WILLIAM EDWIN, C.B., 1911; G.O.C. 2nd (Rawal Pindi) Division, since 1916 ; *b.* Clonfert, 5 April 1858 ; *s.* of late Bishop of Limerick ; *m.* 1893, Eva Mary, *d.* of Francis Gate, Cheltenham. *Educ.:* St. Columba's College, Rathfarham. Entered Army, 1878 ; Col, 1908 ; passed Staff College ; D.A.G. Northern Army India, 1908 ; served Afghan War, 1880 (medal) ; Mahsud-Waziree Expedition, 1881 ; Isazai Expedition, 1892, Chitral, 1895 (despatches, medal and clasp); Waziristan, 1901, 1902 (despatches, clasp); Commanded Kohat Brigade, May to Nov. 1912 ; Quartermaster-General in India, 1912-16. *Address:* Rawal Pindi.

BUNDI, H. H. MAHARAO RAJA, SIR RAGHUBIR SINGHJI BAHADUR, G.C.S.I., 1919 ; K.C.S.I., *cr.* 1897, C.I.E. *cr.* 1900, G.C.V.O. *cr.* 1911 ; *b.* 26 Sept. 1869. *S.* 1889. *Address:* Bundi, Rajputana.

BURDEN, LT.-COL. HENRY, C. I. E., 1911 ; F.R.C.S., I.M.S. ; Residency Surgeon, Nepal, *b.* 26 April 1867 ; unmarried. *Educ.:* home. Entered St. Thomas Hospital, London, 1886 ; entered Indian Medical Service, 1894 ; served Relief of Chitral (medal and clasp) : North-West Frontier, 1897-98 (two clasps). *Address:* Nepal.

BURDON, ERNEST, C.I.E. (1921) : Financial Adviser, Army Finance, since 1919. *b.* 27 Jan. 1881. *Educ.* Edinburgh Academy, Univ. Coll., Oxford. Entered I.C.S., 1905; Financial Under Sec., Punjab Govt., 1911. Financial Under Sec. to Govt. of India, 1914; Financial Adviser, Military Finance, 1916: Financial Adviser to G.O.C. in Chief, Mesopotamia Expedit. Force, 1918. *Address:* U. S. Club, Simla.

BURDWAN, HON. SIR BIJAY CHAND MAHTAB, MAHARAJADHIRAJA BAHADUR OF, K.C.S.I., *cr.* 1911 ; K.C.I.E., *cr.* 1909 ; I.O.M., *cr.* 1909 ; F.R.G.S., F.R.S.A., F.R.C.I., F.N.B.A., M.R.A.S. ; *b.* 19 Oct. 1881 ; a Member of 3rd class in Civil Division of Indian Order of Merit for conspicuous courage displayed by him in the Overtown Hall, Calcutta, 7 Nov. 1908 ; adopted by late Maharajadhiraja and succeeded, 1887, being installed in independent charge of zamindari, 1903 ; *m.* 1897 Radharani (Lady Mahtab) of Lahore ; a Member of Imperial Legislative Council, 1909-12 ; Bengal Legislative Council since 1907-1908 ; Member, Beng. Executive Council, since Jan. 1919 ; Trustee of The Indian Museum, 1908 ; President, Agri-Horticultural Society of India, Calcutta, 1911-12 ; President of the British Indian Association, Calcutta, 1911-18; Trustee of the Victoria Memorial, Calcutta, since 1914. *Heir:* Maharajadhiraja Kumar Uday Chand Mahtab, *b.* 14 July 1905. *Address:* The Palace, Burdwan ; Bijay Manzil, Alipore, Calcutta ; Tejvilash Palace, Kalna ; The Retreat, Kurseong; Rose Bank, Darjeeling Mosapher Manzil, Agra, U. P.

BURFOOT, HENRY FRANCIS, (Dayasagar) *b.* March 1st, 1867 (Hastings). Became a Salvation Army Officer in 1885. Secretary for the Salvation Army's Educational, Young Peoples and Literary work in the Western India Territory. Arrived in Bombay from England in January 1887. Has held various appointments in N. India, Punjab, Rajputana, Gujarat and Telegu country. Has edited the Gujarati Salvation Army periodicals for the past 15 years. *Address:* The Salvation Army Hd.-qrs., Morland Rd., Byculla, Bombay.

BURN, RICHARD, C.S.I., 1917 ; Commissioner, United Provinces, since 1918 ; *b.* Liverpool, 1 Feb. 1871 ; *m.* 1899, Grace Irene Cargi; (*d.* 1918). *Educ:* Liverpool Institute. Christ Church; Oxford. Entered Indian Civil Service, U. P., 1891 ; Superintendent; Census, and subsequently Gazetteer, 1900; Editor, Imperial Gazetteer of India, 1905; Secy. to Govt., U. P., 1910; Chief Secy., 1912;

Publications: Census Report, U. P., 1902; Provincial Gazetteer, 1906; Various papers on Numismatics in journals, Asiatic Society, Bengal, Royal Asiatic Society and Numismatic Chronicle. *Address:* Allahabad.

BURNETT-STUART, Major-General John Theodosius, C.B. (1917); C.M.G. (1916); D.S.O. (1900); G.O.C. Madras District; *b* 14 March 1875. *m.* 1904, Nina, *d* of Maj. Nelson, late 5th Dragoon Guards. *Educ.:* Repton; Sandhurst. Joined Rifle Brigade, 1895. Served North-West Frontier Expedition, 1897-98 (medal with clasp); South African War, 1899-1902 (despatches, Queen's medal, 4 clasps, King's medal, 2 clasps, D.S.O.), European War, 1914-18 (despatches, C.B., C.M.G., officer of the Legion of Honour); Commander of the order of the Crown of Belgium; Croix de Guerre with palm (France); Croix de Guerre (Belgium). prom. Col., 1916, Major-General, 1919. *Address:* G. O. C.'s House, Wellington.

BURTCHAELL, Lieut.-General Sir Charles Henry, K.C.B., *cr.* 1919, C.B., 1917; C.M.G., 1915; Kt. of Grace order of St. John of Jerusalem. M.A., M.B., B.Ch., Hon. LL.D (Dublin Univ.) Hon. F.R.C.I., F.R.C.S.I. Director Medical Services in India, since June 1919; *b.* 30 Aug. 1866; *m.* 1903, Bertha Marcella, *d.* of J. G. Auret, Johannesburg. *Educ.:* Dublin. Served in R.A.M.C. Major, 1898; Lt.-Col., 1906; Col., 1915; Major Gen., 1917, P.M.O., S. African Constabulary, 1902-5. Asstt. Director-General, War Office, 1910; served N. W. Frontier, India, 1897-98 (medal with clasp) Tirah, 1897-98 (despatches, clasp); S. African War, 1899-1902 (despatches, Queen's Medal, 4 clasps, King's medal, 2 clasps); European War; Asstt. Dir.-Gen, and later Director-General, Medical Services British Armies in France and Chief Commissioner, British Red Cross Society and Order of St. John (despatches ten times; C.M.G., C.B., Promoted Lieut.-Gen. for distinguished service; Officer Commander Legion of Honour); Grand Officer Grand Couronne Belgium and Croix de Guerre, Croix de Guerre Arec Palm France; Dist. Service Cross United States America, Afghan War 1919. *Address:* Army Headquarters, **India.**

BUTLER, Sir (Spencer) Harcourt, K.C.S.I. *cr.* 1911; C.S.I., 1909; C.I.E., 1901; I.C.S.; Governor of U. P. of Agra and Oudh, since 1917; *b.* 1 Aug. 1869; *m.* 1894, Florence *d.* of F. Nelson Wright; *Educ.:* Harrow; Balliol College, Oxford. Served as Secretary to Famine Commission; Financial Secretary to Government; Director of Agriculture; Judicial Secretary to Government; Deputy Commissioner, Lucknow; Foreign Secretary to the Government of India; late Member of the Executive Council of the Governor-General; Lieut.-Governor of Burma, 1915-17. *Address:* Governor's Camp, United Provinces.

CADELL, Patrick Robert, C.S.I., 1919; C.I.E., 1913; V.D., Indian Civil Service; Commissioner, Southern Division, Bombay. *b.* 6 May 1871; *m.* in 1920, Agnes, *d.* of John Kemp, Bar-at-Law, London. *Educ.:* Edinburgh Academy; Haileybury; Balliol College, Oxford. Member of Oxford University Football XV., 1890-91; selected to play for South of England; service in India since 1891; served in Bombay Presidency and in Calcutta; Lieut.-Col. commanding 15th Bombay Battalion, Indian Defence Force; Chief Secretary, Govt. of Bombay. Commissioner in Sind, 1919-20. Hon. Colonel; Hon. A.D.C. to Viceroy. *Address:* Belgaum.

CALCUTTA, Bishop of, Rt. Rev. Foss Westcott, D.D. *b.* 23 October 1863. *s.* of the Rt. Rev. B. F. Westcott (late Bishop of Durham). *Educ.:* Cheltenham and Peterhouse, Cambridge. Joined the S. P. G. Mission, Cawnpore, 1889. Bishop of Chota Nagpore, 1905. Bishop of Calcutta and Metropolitan in India, 1919. *Address:* Calcutta.

CALNAN, Denis, C.B.E. (1919), I.C.S., Commissioner of a division in the U. P. *b.* 14 May 1865. *Educ.:* St. Stanislaus' College, Tullamore, and Queens' College, Cambridge, *m.* Florence, *d.* of D. N. Reid, Behar. Has held charge of the Agra, Meerut, Kumaun, Allahabad, Gorakhpur, Fyzabad and Jhansi divisions. *Publications:* Manual of famine administration, U. P. Reed. Kaiser-i-Hind Medal, first class, 1901.

CAMPBELL, Major-General Sir David Graham Muschet, K.C.B. *cr.* 1919; C.B. 1916, G.O.C. Baluchistan District. *b.* 28 Jan. 1869; *m.* Janet Mary *d.* of Sir Robert Aikman; one *s.* two *d.* *Educ.:* Clifton. Joined 9th Lancers, 1889; served through S. A. Campaign, 1899-1902 (despatches, Bt.-Major, Queen's medal, 7 clasps, King's Medal 2 clasps); European War 1914-18, first in command of 9th Lancers, then of a cavalry brigade, 21st Div. from 1916 despatches six Bt.-Col., C.B. prom. Maj.-Gen.. Legion d' Honneur (Croix de Commandeur); rode winner of following races; Liverpool Grand National, 1896 (the Soarer), Grand Military, 1896 (Nelly Grey) and 1897 (*Parapluie*), Irish Grand Military, 1895 (Balbrigan), Irish National Hunt Cup 1895 (Dakota) and 1896 (Lord Arravale). *Address:* Flagstaff House, Quetta.

CARTER, Sir Frank Willington, C.I.E., 1915; C.B.E., 1918; late Director of Turner Morrison & Company, Limited, Calcutta. *b.* 16 Jan. 1865; *m.* Mary, widow of Commander Charles Collins *e. d.* of Rev. Dacres Oliver. *Educ.:* Cheltenham College. Articled to land agents in England and later farmed in Texas and California: joined the Basutoland Police in South Africa, and came to India in 1891: joined the firm of Turner, Morrison & Co. in that year. *Address:* Bengal Club, Calcutta.

CASSELS, Maj.-General Robert Archibald, C.B., 1918, C.S.I., D.S.O., Major-General, Cavalry, A. H. Q. India, *b.* 15 March, 1876. Served in the European war, including Egypt and Mesopotamia. *Address:* Army Headquarters, India.

CAUMONT, Rt. Rev. Mgr. Fortunatus Henry, D.D., O.S.F.C.; 1st R.C. Bishop of Ajmer, since 1913; *b.* Tours, 10 Dec. 1871. *Educ.:* Tours. Took his vows, 1890; priest, 1896; joined Mission of Rajputana, 1897; Military Chaplain of Neemuch, 1900, and of

Mhow, 1901; Prefect Apostolic of the same Mission, 1903. *Address*: Bishop's House, Ajmer.

CHAMNEY, Lt.-Col. HENRY, C.M.G. 1900 Principal, Police Training College, Surdah; *b.* Shillelagh, co. Wicklow; *m.* 1st, 1907, Hon. Cecilia Mary Barnewall (*d.* 1908); *sister* of 18th Lord Trimleston; 2nd, 1913, Alice, *d.* of Col. W. E. Bellingham of Castle Bellingham, co. London. *Educ.*: Monaghan Diocesan School. Served South Africa, 1900, first as Major Commanding Lumsden's Horse and later with South African Constabulary; joined Indian Police, 1909; accompanied the relief column to Manipur in 1891. *Address*: Police Training College, Surdah Rajshahi, Bengal.

CHANDAVARKAR, Sir NARAYEN GANESH Kt. *cr.* 1910; B.A., LL.B., LL.D.; President, Bombay Legislative Council (1921); *b.* 1855. *Educ.*: Elphinstone Coll., Bombay. Became pleader of Bombay High Court, and for a time English Editor of *Indu Prakash*; President, Indian National Congress, 1900; General Secretary of the Indian National Social Conferences, 1901-1918. Vice-Chancellor, University of Bombay, 1909-12; officiated as Chief Justice, June 1909-12; Judge of the Bombay High Court, 1901-1913; Chief Minister, Indore, 1913-14. *Address*: Pedder Road, Bombay.

CHAPMAN, Ven. PERCY HUGH, M.A., LL.D.; Archdeacon of Lucknow, and Chaplain Naini Tal, U. P., since 1912; *b.* 13 April 1866; *m.* 1898, Katharine Margaret, *d.* of the Hon. Sir George Knox, Puisne Judge, High Court, Allahabad. *Educ.*: Felsted Grammar School; King William's College, Isle of Man; Corpus Christi College, Cambridge, B.A. and M.A. Trinity College, Dublin, M.A., LL.B., LL.D. Priest, 1890; *Address*: Naini Tal, U. P.

CHARANJIT SINGH, Sirdar; Chief of the Punjab; Fellow R. G. S.; Member, Royal Society of Arts, member of Kapurthala ruling family; *b.* 1883; *s* of Kanawa Sochet Singh; *Educ.* Jullunder, Chief College; Government College, Lahore. *Address*; Charanjit Castle, Jullunder City; Chadwick, Simla W.

CHARKHARI STATE, H. H. MAHARAJADHIRAJ SIPHAHDAR-UL-MULK GANGA SINGH JU DEO BAHADUR; *b.* 2 Nov. 1851; S. 1914. *Address*: Charkhari State, Bundelkhand.

CHATTERJEE, THE HON. MR. ATUL CHANDRA; Sec. to Govt. of India, Dept. of Industries *b.* 24 Nov. 1874. *Educ.* Hare School and Presidency Coll., Calcutta, and King's Coll., Cambridge. *m.* Vina Mookerjee (deceased). Entered I.C.S. 1897. Served in U. P. Special Inquiry into Industries in U.P. 1907-08, Registrar Co-operative Society U P. 1912-16; Revenue Sec. U. P. Govt., 1917-18; Ch. Sec. U. P. Govt. 1919; Govt. of India delegate to International Labour Confce, Washington, 1919, Member, Munitions and Industries Board, 1920; Member of Council of State. *Publication*: Note on the Industries of the United Provinces, (1909.) *Address*: Yarrowville, Simla.

CHATTERTON, Sir ALFRED, K-I-H. (1900). C.I.E., 1912; Kt. 1919, B. Sc., F.C.G.I., A.M. I.C.E., M.I.M.E., etc.; Industrial Adviser and Director of Sandal Oil Factories, Govt. of Mysore, since 1918; also Industrial Adviser to the Tata Industrial Bank, since 1920. *b.* 10 Oct. 1866; *m.* 2nd, 1901, Alice Gertrude *d.* of W. H. Wilson; two *s.* one *d.* *Educ.*: Finsbury Technical College; Central Institution, South Kensington. Indian Educational Service, 1888, Director of Industries, Madras, 1908; Director of Industries, Mysore, 1912; Mem. of Indian Industrial Commission, 1916-18. *Publications*: Industrial and Agricultural Problems in India, Lift Irrigation and Industrial Evolution in India. *Address*: The Tata Industrial Bank, Bombay and London.

CHAUBAL, Sir MAHADEV BHASKAR, K.C.I.E., *cr.* 1917; C.S.I., 1911; B. A., LL.B.; *b.* 15, Sept. 1857; *m.* Anandibai only d. of Parashram S. Gupte, 1870 *Educ*: Government High School, Poona; Deccan College, Poona; Assistant Master, Elphinstone High School, Bombay, 1879-83; Vakil, High Court, Bombay, 1883; Acting Puisne Judge, High Court, Bombay, 1908; Member of the Executive Council of the Governor of Bombay, 1910-12 and 1915-17; Member of the Public Services Commn., 1913-15. *Address*; 6, Finance Office Road, Poona.

CHAUDHARI, JOGESH CHANDRA, B.A. (Oxon) M.L.A, Bar-at-Law, *b.* 28 June 1864, *m.* Sarasibala Devi, 3rd d. of Sir Surendranath Banerjea. *Educ.* Krishnaghar Collegiate School, Presidency College, Calcutta, St. Xavier's College, Calcutta and New College, Oxford. For some time lecturer of Physics and Chemistry at Vidyasagar College, Calcutta; Editor, Calcutta weekly Notes since 1896; Organising Secry., Indian Industrial Exhibitions in Calcutta in 1901-1902 and 1906-7; Member, Bengal Council, 1904-7. *Publications*: Elements of Physics; Calcutta Weekly Notes, Law of Sedition, and History of Hanpur. *Address*: 3, Hastings Street, and "Devadwar," 34, Bahgunge Circular Road, Calcutta.

CHAUDHURI, Sir ASUTOSH, Kt., *cr.* 1917. B.A. (Cantab.), M.A. (Calcutta University), Barrister-at-Law; *b.* Bengali Brahmin, 1860; *m.* Prativa Devi, of the Tagore family of Calcutta. *Educ.*: St. John's College, Cambridge; Presidency College, Calcutta. After graduating in Calcutta went to Cambridge; admitted as an Advocate of the Calcutta High Court, 1886; President of the Bengal National Conference; founded the Bengal Land-holders Association in Calcutta; one of the founders of the Calcutta National College; has always taken prominent part in reform movement in Bengal; first Hindu of the Calcutta Bar appointed Judge of the High Court. *Address*: Ballygunge, Calcutta.

CHETTIAR, The Hon. Rao Bahadur S. R., M.A. Annamalai Chetty, Member of the Council of State, *b.* 1880. Has been a member of Madras Legislative Council; Governor of the Imperial Bank of India; Manager and founder of the Sri Meenakshi Coll., Chidambaram; Is a member of the Nattukkotta Chetty Community. *Address*: Natana Vilas 38, Police Commr.'s Rd., Vepery, Madras.

CHHOTA UDEPUR, MAHARAWAL SHREE FATEHSINHJI, RAJAJI OF; *b.* 22 Oct. 1884; *S.* 1895; *m.* sister of Maharaja of Rajpipla (*d.* 1914); Second wife, sister of Mahida Saheb Shree Ranjitsinhji of Mandwa. *Educ.* : Rajkumar Coll., Rajkot. A Chown Rajput. Installed 12 March 1906. *Heir* : Prince Shree Natwarsinhji, *b.* 1907. Salute of 9 guns. *Address* : Chhota Udepur, Rewa Kantha Agency.

CHITNAVIS, SIR GANGADHAR MADHAV, K.C.I.E., C.I.E. ; *b.* 1863; President, Central Provinces Legis. Council; President, Nagpur Municipality, 1896-1918; selected to represent Central Provinces on Impl. Legislative Council, 1893-1895, 1898-99; President of C. P. and Berar Provincial Conference, 1906; additional member of Viceroy's Legislative Council, 1907; elected representative of landholders in the C. P. reformed Council, 1910-1916. Nominated Member of Imp. Legis. Council from 1918; landholder in C. P. *Address* : Nagpur, Central Provinces.

CHRISTOPHERS, MAJOR SAMUEL RICKARD, M.B., C.I.E.; I.M.S. Member, Malaria Commission, Royal Society and Colonial Office, 1898-1902. *Address:* Malaria Bureau, Central Research Institute, Kasauli.

CLARKE, THE HON. MR. GEOFFREY ROTHE, C.S.I., 1921; O.B.E. (1917), Director-General, Posts and Telegraphs, since 1918. *b.* 4 July 1871. *m.* Hilda Geraldine Seymour. *Educ.*: Corrig School, Kingstown and T. C., Dublin. Entered I.C.S., 1895. Officiated as P. M. G., Punjab, and N. W. F., 1903. Confirmed as P. M. G., Madras, 1906. On special duty with Ministry of Munitions in London, 1916 and sent on duty to America and Canada. *Publications* : "The Outcastes," "The Post Office of India and Its Story." *Address* : The Rookery, Simla.

CLARKE, REGINALD, C.I.E. (1919); Commissioner of Police, Calcutta. *b.* 16 March 1876. *m.* Edith, daughter of Andrew Johns, J. P., Shortlands, Kent, *Educ.*; privately. Joined Indian Police, 1900. *Address*: 2, Kyd St., Calcutta.

CLAYTON, HUGH BYARD, I.C.S., Municipal Commr., Bombay. *b.* 24 Dec. 1877. *m.* Annie Blanch Nepean. *Educ.*: St. Paul's School, Wadham College, Oxford. 1st class Lit. Hum. Came to India, 1901; served in Bombay Presidency; employed in Military Intelligence Branch of War Office, 1914-19. *Address* : Mount Pleasant Road, Malabar Hill, Bombay.

CLIMO, MAJOR-GENERAL, SIR SKIPTON HILL, K.C.B. (for services in Waziristan, 1921.) C.B. 1916; D.S.O.; G.O.C., Poona District. *b.* Longford, 24 December 1868. *Educ* : Shrewsbury and Sandhurst. Joined 2nd Battalion, Border Regiment, 1888; 24th Punjab Infantry, 1889. Served in Defence of Malakand, 1897; N.W. Frontier Expedition, 1897-98 (medal with two clasps, despatches, D.S.O., Brevet of Major); served China, 1900-1 (despatches); Relief of Pekin (medal with clasp); Tibet, 1904 (medal); Mohmand, 1908 (despatches, a medal with clasp); European War (Egypt, Suez Canal), 1914-15 (despatches); Mesopotamia, 1915-16 (despatches, Bt.-Col., C.B., wounded four times); Order of Nile 3rd Class. *Address* : Poona.

CLINTON-BAKER, REAR-ADMIRAL LEWIS, C.B., 1916; C.B.E. (1918); Naval Commander-in-Chief, East Indies, 1921. *b.* 16 March 1866; 2nd *s.* of late William Clinton-Baker of Bayfordbury, Herts.; *m.* 1920, Rosa, M.B.E., *e. d.* of late William Henderson and Mrs. Henderson, Berkly House, Frome. Served in Monarch at Bombardment of Alexandria, July 1882, and during the Egyptian War (Egyptian Medal and Alexandra Clasp and Khedive's Bronze Star); Boer War in Gibraltar, 1901-2 (South African Medal); European War, 1914-17, including Battle of Jutland (despatches, C. B., C.B.E., Commander of Legion of Honour, Order of St. Vladimir, 4th Class with Cross Swords; Admiral Superintendent, Chatham, 1920; Rear Admiral in 2nd Battle Squadron, Atlantic Fleet, 1919-20. *Address*: Admiral's House, The Cooperage, Bombay.

CLOSE, HAROLD ARDEN, C.I.E., 1914; Inspector-General of Police, N W. Frontier Province, since 1909; *b.* 13 Dec. 1863; *Educ.*: Cheltenham; Isle of Man. Joined India Police Dept., 1884; in Punjab first; N.W.F. Province, 1901; Superintendent, 1906; served Black Mountain Expedition, 1891; Mohmand Expedition, 1908. *Address*: Peshawar.

CLUTTERBUCK, PETER HENRY, C.I.E., 1918; C.B.E., 1919; V. D. 1912; F.R.G.S., F.Z.S., F.E.S.; Inspector-General of Forests to the Government of India since 1921, *b.* 1868; *s.* of late Alexander Clutterbuck of Red Hall, Watford; *m.* 1896, Rose Winifred *d.* of Alfred Barrow Wilson Marriott, formerly District Superintendent of Police, Central Provinces, India; three *s. Educ.*: Clifton, College; Bloxham; Coopers Hill College, Indian Forest Service, Central Provinces, 1889; transferred to the United Provinces 1896; Deputy Conservator of Forests, 1897; Conservator of Forests, Eastern Circle; U.P., 1913; Chief Conservator of Forests, U. P., 1915; Kaisar-i-Hind Medal (silver) 1911; served in Volunteer forces, 1887-1918; was Lt.-Col. in command of the 8th (Northern) U.P. Horse of the India Defence Force, 1917-18; was Member of U. P. Legislative Council, 1919-20. *Address*; Simla, India.

COBB, HENRY VENN, C.S.I., C.B.E., C.I.E. ; M.A., LL.M., Cantab.; Resident, Mysore, since 1916. *Educ.* : King's School, Canterbury; Trinity College, Cambridge. Arrived India, 1886, served as Asst. Resident, Mysore; Asst. Commissioner and Commissioner, Ajmer, 1895-97; Asst. Resident, Kashmir, 1899-1900; Resident, Jaipur, 1900-3; Gwalior, 1904-7; Jodhpur and Western Rajputana States, 1908; officiating as Agent to Gov.-Genl. for C. I., 1909. Resident, Baroda, 1909-12; Kashmir, 1914-1915. *Address*: The Residency, Bangalore.

COBDEN-RAMSAY, LOUIS EVELEIGH BAWTREE, J.P., C.I.E., I.C.S.; Political Agent, Orissa Feudatory States, since 1905; *b.* 29 Oct. 1873, *m.* Dorothy Forster Grieve, *d.* of C. J. Grieve, Esq., J. P. Braxholm Park. *Educ.* : Dulwich College, Sidney;

Sussex College, Cambridge. Arrived in India, 1897; Under-Secretary to Govt. of Bengal in Revenue and General Dept., 1900-2; Registrar, Co-operative Credit Societies, 1905. *Publication*: Gazetteer. Orissa Feudatory States. *Address:* Sambalpur, B. N. Railway.

COLE, LIEUT.-COLONEL HENRY WALTER GEORGE, C.S.I.; Deputy Commissioner, Assam Commission; Political Agent in Manipur, 1914. *Educ.:* Wellington College; R.M.C., Sandhurst. Joined 5th Fusiliers, 1885; 2nd Gurkhas, 1887; Asst. Commissioner, Assam, 1891; Dy. Commissioner, 1901; Supdt., Lushai Hills, 1906-11; Director, Temporary Works, Delhi, 1912-13; served Hazara, 1888; Lushai, 1888-1889; Chin Lushai, 1889-92; N. E. Frontier, 1891. *Address:* The Residency, Manipur.

COLLINS, MARK, Ph.D; University Professor of Sanskrit Philology, Madras University, since 1914; Professor of Sanskrit and Comparative Philology, Trinity College, Dublin, 1908-14. *Address:* The University, Madras.

COOCH BEHAR, MAHARAJA BHUP BAHADUR OF, SIR JITENDRA, K.C.S.I.; *b.* 20 Dec. 1886; *s.* of Maharaja Nripendra and Maharani Sunity Devi (*nee* Sen); *S.* brother 1913; *m.* 1913, *d.* of Gaekwar of Baroda. *Educ.:* Eton; Imperial Cadet Corps. *Address:* Cooch Behar, Bengal.

COOK, ARTHUR WILLSTEED, C.I.E., I.C.S., B.A., Magistrate and Collector, Midnapur, Bengal, since June 1919. *Educ.:* Portsmouth Grammar School; Pembroke College, Oxford. Entered I.C.S., 1896. *Address:* Midnapur, B. N. Railway.

COOK, EDWARD MITCHENER, C.I.E. (1919); Secretary to the Government of India, Finance Department; Member of the Council of State. *Educ.:* Uppingham and Clare College, Cambridge, *m.* Christine, *d.* of Dr. Allen Duke Entered I.C.S., 1903. Served in the U. P. until 1911; Under Secretary to Government of India, Home Department, 1911; Finance Department, 1912; Accountant-General, Bombay, 1916; Ag. Controller of Currency, 1917-1918. *Address:* Simla.

COOKE, Major-GENERAL HERBERT FOTHER GILL, C.B. (1919); C.S.I. (1921), D.S.O., (1917). I.A.; Dy. Adjutant General and of Organisation in India; *b.* 13 Nov. 1871; *m.* 1909, Nancy Emelyn Andrews, *Educ.:* Hallows School, Honiton; R.M.C. Sandhurst. First Commission, 1892; joined Indian Army, 1893; Captain, 1901; Major, 1910; Brevet Lt.-Col., 1912; Substantive Lt.-Colonel, 1916, Bt.-Col., 1917, Substantive Colonel, 1917; served Chitral, 1895 (medal and 1 clasp); Tirah, 1897 (2 clasps); Waziristan, 1902 (clasp); Tibet Expedition, 1904 (medal and 1 clasp); European War, from Jan. 1915 to October 1917 (despatches 5 times, D.S.O. Bt.-Col.) several years on Staff Appointments in India including officiating Adjutant-General from March to Sept. 1920. *Address:* C/o Messrs. Grindlay & Co., Bombay or London.

COPPEL, RT. REV. FRANCIS STEPHEN, R.C., Bishop of Nagpur, since 1907; *b.* Les Gets, Savoy, 5 Jan. 1867. *Educ.:* College of Evian: University of France, Lyons, B.A., B. Sc. Entered Congregation of Missionaries of St. Francis de Sales, Annecy; Priest, 1890; sent to India for mission of Nagpur, 1892; for fifteen years attached to St. Francis de Sales College, Nagpur, as professor and principal. *Address:* Nagpur.

COTTERELL, CECIL BERNARD, C.I.E., I.C.S. *Educ.:* St. Peter's School, York; Balliol College, Oxford. Entered I.C.S., 1898; has served in the Madras Presidency, since 1899; Deputy Commissioner, Salt and Abkari Dept, 1905; Private Sec. to Governor of Madras, 1912-15. *Address:* Madras.

COTTON, CHARLES WILLIAM EGERTON, C.I.E. (1920) *b.* 1874. *Educ.*; Eton and Univ. Col. Oxford; I.C.S., 1897. District work in Madras until 1907 when appointed Asstt. Director of Statistics, Calcutta; Offg. Dir.-Genl., Commercial Intelligence, 1908-10; Offg. Dir. of Industries, Madras, 1909-10; Dy. Secy. to the Govt. of Madras, 1911-12; Dy. Secy., Govt. of India, 1912-15; Collector of Customs, Calcutta, 1916-21; Director of Industries, Madras, 1921. *Publications:* Review of the Trade of India, 1908 and 1910; Calcutta Chatterbox, 1918; Handbook of Commercial Information, 1919. *Address:* Madras Club, Madras.

COUTTS, THE HON. MR. JUSTICE WILLIAM STRACHAN, C.I.E., I.C.S.; Registrar of Patna High Court, Bihar, Barrister; District and Sessions Judge, Bihar and Orissa, 1912. Puisne Judge, Patna High Court, 1918. *Educ.;* Dollar; Trinity College, Cambridge, Entered I.C.S., 1895; Joint Magistrate, 1905, *Address:* High Court, Patna.

COVENTRY, BERNARD, C.I.E., 1912; Agricultural Adviser to Native States in Central India, since 1916; formerly Agricultural Adviser to Govt. of India, Director of Agricultural Research Institute, and Principal of Agricultural College, Pusa, Behar; *b.* 10 Dec. 1859. *Educ.:* Beaumont Coll. Came to India, 1881, and joined indigo industry; started agricultural research station on modern lines, 1899; on foundation of Pusa Agricultural Research Institute and College, 1904, was made first Director and Principal; acted as Insp. Gen. of Agriculture and became first Agricultural Adviser to Govt. of India; retired 1916. *Address:* Indore, C.I.

COWIE, WILLIAM PATRICK, B.A., C.I.E. (1920), Indian Civil Service. *b.* 31 January 1884. *Educ.* Malvern; C.C.C., Oxford; *m.* Miss Margaret Burne, 1920. Revenue Dept., 1908-1913; Political, 1913-1918; Army, 1918; Private Secretary to H. E. the Governor of Bombay, 1918-20. *Address:* Grindlay & Co., Bombay.

COX, JOHN HUGH, C.I.E., C.B.E.; Excise Commissioner, C.I., since 1906. *b.* 1870; *m.* 1895 Augusta Edith, *d.* of Edward John Rudgerd Warner, Bar-at-Law. *Educ.* Clifton College; Balliol College, Oxford. Entered I.C.S., 1888; Dy. Commissioner, 1903; Jt.-Sec., Board of Revenue, 1904 Director of Civil Supplies, C.I., 1918-20 *Address:* Indore, C.I.

COX, VEN. LIONEL EDGAR, M.A., Senior Chaplain, St. George's Cathedral, Madras, and Archdeacon of Madras; *b.* 28 March 1868. *Educ.:* Somerset College; Bath; Dorchester Theological College; Durham University. Deacon, 1891; Priest, 1894; joined Madras Ecclesiastical Establishment, 1898; Archdeacon of Madras and Bishop's Commissary, 1910. *Address:* Cathedral, Madras.

COX, STEPHEN, C.I.E. (1921), M.B.E., Ch Conservator of Forests, Madras, *b.* 23 Dec 1870. *m.* Nora, *d.* of Sir Alfred Bourne, F.R.S., K.C.I.E. *Educ.:* Harrow and Cooper's Hill. *Address:* Madras.

COX, CAPTAIN WALTER HULBERT, D.S.O., I.M.S.; Supdt., Burma Lunatic Asylum; L.R.C.P., Ed.; L.R.C.S., Ed.; L.F.P.S., Glas. Medico-Psychological Certificate; *b.* 9 Jan. 1875. Entered Army, 1898; served China, 1900-1901; Mahsud-Waziristan Exp. *Address:* Rangoon.

CRADDOCK, SIR REGINALD HENRY, K.C.S.I., I.C.S.; Lieut.-Governor of Burma, since 1917; *b.* 11 Mar. 1864; *s.* of late Surg.-Major William Craddock, 1st Gurkhas; *m.* 1888, Frances Henrietta, C.B.E., *n. d.* of the late Gen. H. R. Browne, C.B. *Educ.:* Wellington; Keble College, Oxford. Entered I.C.S., 1884; served in C.P. in various capacities, district and secretarial; Chief Sec. to Chief Commissioner, 1900; Commissioner, 1901-7; Chief Commissioner, 1907-12; Home Member of Viceroy's Council, 1912-17. *Address:* Government House, Rangoon.

CROOKSHANK, COL. SIR SYDNEY D'AGUILAR, K.C.M.G. (1919), C.B. (1918), C.I.E., M.V.O.; Secretary to the Govt. of India, P. W. D.; *b.* 3 June 1870.; *m.* Beryl Mary Still, *d.* of late Com. Willoughby Still, R. N. *Educ.:* Neuenheim Coll., Hiedelberg and Northcott's, Ealing, Royal Mil. Academy, Woolwich, 1887-1889; School of Military Engineering, Chatham, 1889-1891; Military Works Department, India, 1891; State Railways, 1892; Public Works Department, 1893; Under Secretary, Government of the United Provinces, 1905; Superintendent, Durbar Works, Delhi, 1911; Relief of Chitral, 1895; British Expeditionary Force, France, 1914-1919; Commanding Field Squadron, 2nd Indian Cavalry Division, 1914, Commanding Royal Engineers, 47th (London) Division, 1915-1916; Deputy Director of Light Railways, British Armies in France, 1916; Chief Engineer, XV Corps, British Armies in France, 1917; Deputy Director-General, Transportation, British Armies in France, 1917; Director-General, Transportation, British Armies in France (Temporary Major-General), 1918-1919; Secretary, Government of India, Public Works Department, 1919; Member, Legislative Assembly, 1920; Knight of Grace of the Order of the Hospital of St. John of Jerusalem, 1920; Legion d'Honneur-Commandeur, Military Order of Avis-Grand Officier, 1919; Ordre de Leopold-Commandeur, Croix De Guerre (French) avec palmes, 1919; Croix De Guerre (Belge). The Distinguished Service Medal conferred by the President of the United States of America, 1920, 2nd-Lieutenant, Royal Engineers, 1889; Lieutenant, Royal Engineers, 1892; Captain, Royal Engineers, 1900; Major, Royal Engineers, 1909; Lieutenant-Colonel, Royal Engineers, 1917; Colonel (General list), 1918. *Address:* Simla and Delhi.

CRERAR, JAMES, C.S.I. (1922); C.I.E. (1917); Secretary to the Government of Bombay, Home Department, *b.* 1877; *m.* to Evelyn, *d.* of the late Hon. Charles Brand. Educated at George Watson's College; Edinburgh, Edinburgh University and Balliol College (Oxon). Assistant Collector, Sind; Manager of Encumbered Estates, Sind; Assistant Commissioner in Sind; Deputy Municipal Commissioner, Bombay; Municipal Commissioner, Bombay; Private Secretary to H. E. the Governor of Bombay. *Address:* The Secretariat, Bombay.

CRICHTON, LT.-COL. RICHMOND TREVOR, C.I.E.; Director of Surveys, Bengal, since 1900; *b.* 8 March 1865. *Educ.:* Edinburgh; R.M.C., Sandhurst. Entered 2nd Batt. H.L.I., 1884; Captain, I.S.C., 1895; Major, I.A., 1902; joined Survey Dept., 1889; Dy. Supdt., 1895; Supdt. of Settlement Surveys, 1895. *Address:* Survey Department, Calcutta.

CRIPPS, COL. ARTHUR WILLIAM, C.B.; *b.* 16 Jan. 1862. Entered Army 1882; Capt., I.S.C., 1893; Major, I.A., 1901; Lt.-Col., 1908; Col., 1913; served 1st Miranzai Expedition, 1891; Tirah, 1897-98; China, 1900; European War, 1914-16. *Address:* Army Headquarters.

CRUM, SIR WALTER ERSKINE, O.B.E. (1918). Partner in Messrs. Graham & Co. *b.* 2 September 1874. *m.* Violet Mary Forbes. *Educ.:* Eton. New College, Oxford. President, O.U.B.C., 1895-97. President, Bengal Ch. of Commerce, 1919. Member, Bengal Legislative Council, 1918-19. Major, 3rd Calcutta Light Horse. *Address:* C/o. Messrs. Graham & Co., 9, Clive Street, Calcutta.

CRUMP, LESLIE MAURICE, C.I.E. (1921). Pol. Agent, Bundelkhand. *b.* 12 September 1875. *Educ.*, Merchant Taylors Sch; Merton Coll., Oxford; Rugby football blue, 1896-97. Entered I.C.S., Bengal, 1898. Pol. Dept., Govt. of India, 1900. Served in Hyderabad, N. W. Frontier, Central India, Phulkian States. *Address:* Nowgong, Bundelkhand, C.I.

CUBITT, MAJOR-GENERAL THOMAS ASTLEY, C.B., 1919; C.M.G., 1916; D.S.O., 1903; R.A., G.O.C. Bengal Presidency and Assam District; *b.* 9 April 1871. Entered Army 1891. Deputy Commissioner, Somaliland Protectorate, 1914; served West Africa, 1898 (medal with clasp); expedition against Munshis, 1900 (despatches, clasp); West Africa, 1901, as Staff Officer (despatches, brevet major, medal with clasp); West Africa 1902, (despatches, clasp); West Africa 1903, Kano-Sokoto Campaign (despatches, clasp, D.S.O.); European war in command of troops, Somaliland, 1914-18 (despatches, C.M.G., C.B., Bt. Col.); European War in France, *Address:* Calcutta.

CULLEN, LT.-COL. ERNEST HENRY SCOTT, C.M.G., M.V.O., D.S.O.; 32nd Pioneers; *b.* 16 Nov. 1869. Entered Army, 1890; Lt.-Col., 1915; served Chitral, 1895; N.W.F., 1897-98; Tirah, 1897-98; Waziristan, 1902; Tibet, 1903-4; Abor Expedition, 1912; European War (Mesopotamia), 1914-16. *Address:* Sialkot.

CUTTRISS, C. A., M.B.E., Secc., Burma Chamber of Commerce. *b.* 21 Nov. 1868. Was Hon. Sec., Burma "Our Day" fund and Burma War fund. Rangoon Rivercraft Committee and Rangoon Impressment of Shipping Committee during the war. *Address:* P. O Box 324, Rangoon.

DADABHOY, SIR MANECKJI BYRAMJEE, KT. (1921); C.I.E. *b.* Bombay, 30 July 1865; *m.* 1884, Bai Jerbanoo, O. B E., *d* of Khan Bahadur Dadabhoy Pallonji of the Commissariat Dept. *Educ.:* Proprietary High School and St. Xavier's College, Bombay. Joined Middle Temple, 1884; called to Bar, 1887; Advocate of Bombay High Court, 1887; Government Advocate, Central Provinces, 1891; President, Prov. Industrial Conference, Raipur, 1907; President, All India Industrial Conference, Calcutta, 1911; Member of Viceroy's Legislative Council, 1908-12 and 1914-17, a Governor of the Imperial Bank of India (1920). Elected to the Council of State, 1921; Managing Director, Nagpur Electric Light and Power Co., Ltd., Berar Manufacturing Co., Ltd., and the Model Mills, Nagpur, Limited. Proprietor Ballarpur, Sasti, Ghugus and Pisgaon-Rajur Collieries; numerous Manganese Mines in the Central Provinces and Berar and Behar and Orissa; Several Gin and Press Factories in all parts of India. *Publications:* Commentary on the Land Laws of the Central Provinces, and Commentary on the Central Provinces Tenancy Act. *Address:* Nagpur, C. P.

DALAL, SARDAR ROMANJI ARDESHIR, Member of the Legislative Assembly since January 1921, *b.* 18 April 1855. *Educ.* in Broach and Bombay, *m.* Bai Navazbai Romanji Dalal. Owns 3,000 acres of land in Panch Mahals. *Address:* Baroda Camp.

DALAL, DADIBA MERWANJEE, C.I.E. (1921) Member of Council of the Secretary of State for India (1921). *b.* 12 Dec. 1870. *m.* Jaijee Bomon-Behram. *Educ.* in Bombay. Gave evidence before the Chamberlain Commission. Member of the Committee on Indian Exchange and Currency (1919) and wrote minority report. *Address:* 1, New Marine Lines, Bombay.

DALLAS, LT.-COL. CHARLES MOWBRAY, C.S.I.; Commissioner, Punjab, 1911-16; *b.* 30 Aug. 1861; Entered Army, 1881; Major I.A., 1901; Lt.-Col., 1907; served Miranzai Expedition, 1891; Asst. Commissioner, 1887; Deputy Commissioner, 1897; Political Agent, Phulkiang States and Bahawalpur, 1905; Commissioner, Delhi, 1910.

DAMLE, RAO BAHADUR KESHAV GOVIND, C.I.E., (1921): High Court Vakil, Akola (Berar). *b.* 25 June, 1868. *Educ.* Akola, Deccan Coll., Poona. Law Class, Bombay. Practised law at Akola since 1895. Member, C. P. Legis. Council, 1914-16. Chairman, Co-op. Central Bank, Ltd., Akola. Member of Committee appointed by C. P. Govt. to draw up a scheme of village panchayats. *Address:* Akola.

DARLEY, BERNARD D'OLIER, C.I.E. (1919); Executive Engineer, P. W. D., United Provinces; *b.* 24 August 1880. *Educ.:* T. C. Dublin and Cooper's Hill, A.M.I.C.E. Irrigation work in P. W. D. since 1903. *Address:* Naini Tal, U. P.

DAS, MAJOR-GENERAL RAI BAHADUR DEWAN BISHAN, C.I.E., C.S.I., Chief Minister to H. H. the Maharaja of Jammu and Kashmir, *b.* Jan. 1865. *Educ.* at Punjab Government College, Lahore; Private Secretary to Raja Sir Ramsingh, K.C.B., 1886-1898; Mily. Secy. to the Com.-in-Chief, Jammu and Kashmir, 1898-1909; Mily Secry. to H. H. the Maharaja, 1909-14; Home Minister to H. H. the Maharaja, 1914-18, Rev Minister, 1918-1921 and Chief Minister, March 1921. *Address* Jammu and Kashmir.

DAS, M. S., C.I.E.; Minister (Local Self Government), Bihar and Orissa, since Jan. 1921. *b* 28 April 1848. *Educ* · Calcutta University, M.A., B.L., M.R.A.S., F.N.B.A. Represented Orissa in Bengal Legislative Council four times; Fellow of Calcutta University, elected by Legislative Council of Bihar and Orissa to Imperial Council, 1913; nominated to Legislative Council of Bihar and Orissa. *Address:* Patna.

DAS, THE HON. MR. JUSTICE PROFULLA RANJAN, Judge, High Court, Patna, 1919. *b.* 28 April, 1881. *Educ:* St. Xavier's College, Calcutta. *m* Dorothy May Evans, 1904. *Address:* Ali Manzil, Patna.

DAS, SATISH RANJAN, Member, Bengal Legislative Council Standing Counsel to the Govt. of India since 1917. Officiated as Advocate General, Bengal, in 1919. *b.* 29 February 1872. *Educ.:* Manchester Grammar School *m* Bonolata, *d* of the late B. L. Gupta, I.C.S; called to the Bar (Middle Temple), 1894. Advocate, Calcutta High Court, 1894. *Address:* 7, Hungerford St., Calcutta.

DAVID, SIR SASSOON (Jacob), 1st Baronet, *s.* of Jacob David, of Bombay; *b.* 11 Dec. 1849. *Educ.:* Bombay; Cotton Yarn Merchant and Mill Owner, and J.P. Sheriff, 1905. For several years Member of Bombay Improvement Trust Board, of Municipal Corporation (President, 1921-22) and of its Standing Committee; Promoter and Chairman of Bank of India, and Chairman and Director of several Cos.; was Chairman of Bombay Millowners' Association, 1904-05; Member of Council of Governor-General of India, Kt., 1905; *m.* 1876, Hannah; *d.* of late Elias David Sassoon. *Address:* 143, Esplanade Road, Bombay.

DAVIDSON, SIR LIONEL, K.C.S.I. (1921), Mem. of the Exec. Council of the Governor of Madras since 1918, Vice-President, 1921. *b.* 19 Jan. 1868; *m.* to Emily Bryce Pearson, *d.* of Col. H. P. Pearson, C.B. *Educ.:* University College School and University College London, Balliol College, Oxford (M.A.), Entered I.C.S., 1888; Under-Sec to Govt 1896; Sec. to Land Revenue Comsrs., 1900 Comsr. and District Judge, Coorg, 1902; Collector and Magistrate, 1905-1910; Ag: Resident in Travancore and Cochin, 1908-09; Sec. to Govt. and Member of Leg. Council. Madras, 1910; Member, Imp. Leg. Council; 1916 and 1917; Chief Sec., Madras Govt., 1916-1918. *Address:* Adyar House, Madras.

DAVIES, The Rev. Canon Arthur Whitcliffe (Kaiser-i-Hind Gold Medal 1921); Principal, St. John's College, Agra, *b.* 1878; *m.* Lilian Mabel Birney. *Educ.*: Uppingham School, Univ. College, Oxford; Church Missionary Society, Lahore, 1906; Ordained Ripon Diocese, 1908; Joined St. John's College, Agra, 1909; Principal, 1913; Canon of Lucknow, 1917; Fellow of Allahabad University. *Address*: St. John's College, Agra.

DE, Kiran Chandra, A.B., C.I.E., I.C.S.; Commissioner of Chittagong since 1916. *b.* Calcutta, 19 January 1871. *Educ.*: Presidency College, Calcutta; St. John's College, Cambridge. Registrar of Co-operative Societies, also Fishery Officer, 1905; Magistrate-Collector, Rangpur, 1911; Member of Bengal District Administration Committee, 1913; Press Censor, Bengal, 1914. Secretary to Govt. of Bengal, Genl. Dept., 1915; Member of the Legislative Council of the Governor-General of India, 1920. *Address*: 1, Dumdum Road, Cossipore, Calcutta; Brookeside, Shillong.

DELAMAIN, Lieut.-Gen. Sir Walter Sinclair, K.C.M.G., *cr.* 1918; C.B., 1914; D.S.O. 1904; Indian Army; Adjutant General, since 1920; *b.* 18 February 1862; *m.* 1897 Gladys Frances, *d.* of Thomas Russell, J.P.; joined Royal Berks Regiment, 1881; Capt. 1892; Major 1901. Served Egypt 1882, (medal, bronze star); Burmah, 1885-88, (medal with two clasps); Zaila Field Force, 1890; China 1900 (despatches, medal); Waziristan, 1901-2 (medal with clasp); Aden Boundary Commission, 1904 (D.S.O.), served (Mesopotamia) European War, 1916-18 (despatches twice). *Address*: Army Headquarters, India.

DE MONTMORENCY Geoffrey Fitzhervey, C.I.E., I.C.S.; Sec to H. R. H. the Prince of Wales during the Royal tour in India, Chief Secy. to Punjab Government; *b.* 23 Aug 1876. *Educ.*: Malvern; Pembroke College, Cambridge. Entered I.C.S., 1899; Deputy Commissioner, Lyalpur, 1907; Settlement Officer, Chenal, 1907, Junior Sect. to Financial Commissioner, 1911; on special duty in connection with transfer of capital to Delhi, 1912; Personal Assistant and Dy Commr. till 1918; Dy. Secretary, Foreign and Political Deptt., Govt. of India, 1920-21. *Address*: c/o Punjab Government, Lahore.

JENNYS, Lt.-Col. Sir Hector Travers, K.B.E., C.I.E.; Indian army; *b.* 9 Mar. 1864; *m.* 1888, Lucy Maud Massy, 2nd *d.* of General George Wheeler; *Educ:* Cheltenham College and Sandhurst. Commission in Manchester Regt., 1885; Indian Army, 1887; joined Punjab Police, 1888; Superintendent of Police, 1891, Deputy Inspector-General of Police 1906, Inspector-General from 1914-19. Retired in March 1919. *Address*: "The Perch," Maymyo, U. Burma.

DESIKACHARI, Tirumalai, Diwan Bahadur, B.A., B.L., recipient Kaisar-i-Hind Medal. High Court Vakil. *b.* Sep. 1868. *m.* Cousin, *d.* of Diwan Bahadur T. M. Rangachari. *Educ.*: Pachaiyappa's and Presidency Colleges. Member, Madras Legis. Council, 1919. President, District Board, Trichinopoly, M.L.C., 1921. *Address*: "Venkata Park," Raynolds Road, Cantonment, Trichinopoly.

DESIKACHARRY, Sir Vembakkam C., Kt., B.A., B.L., F.M.U.; Judge of the Court of Small Causes, Madras, since 1908; *b.* 29 Dec. 1861. *Educ.*: Presidency College, Madras. Additional Member, Madras Legislative Council, 1904-8; Fellow, Madras University, since 1903; sometime Vice-President, National Indian Association, Madras. *Address*: Padma Vilas, Luz, Mylapore, Madras.

DES VOEUX, Lt.-Col. Herbert, C.S.I., Inspector General of Police, Burma. *b.* 8 August 1864. *m.* Minna, *d* of the late Lt.-Col T. T. Haggard, R. A. *Educ*: Berkhamstead. Enlisted 8th Hussars, 1883; Commissioned, 1887. Served with 1st Bengal Lancers and Burma Mil. Police. Appointed to Burma Commission, 1890. *Address*: Rangoon.

DEVADHAR, Gopal Krishna (Kaiser-i-Hind Gold Medal in 1920), Vice-President, Servants of India Society. *b.* 1871. *m.* Dwarkabai Sohani, of Poona. *Educ*: New English School, Poona, and Wilson College, Bombay. M. A., Bombay University, 1904. Joined the late G. K. Gokhale in his public work, 1904, and was first member to join Servants of India Society, 1905. Head of Bombay Branch Toured in England and on the Continent in 1918 as member of Indian Press Delegation. One of the founders and Hon. Organiser and General Secretary of the Poona Seva Sadan Society started in 1909 and Joint Asstt. General Secretary of the National Social Conference. Organiser of the Malabar Relief Fund, 1921. Has published several pamphlets on co-operation, Female Education and Social Reform. *Address*: Girgaum, Bombay.

DEW, Hon. Lt.-Col. Sir Armine Brereton, K.C.I.E. (1921); C.S.I., Political Agent, Kalat, since 1912; *b.* 27 Sept. 1867. *Educ*: Wellington College. Entered army, 1888; Indian army, 1899; served Hazara Expedition, 1891; attached to Gilgit Agency, 1894; joined Political Department, 1897; Political Agent, Gilgit, 1908-12. *Address*: The Residency, Quetta.

DHRANGADHRA, H. H. Maharana Shree Sir Ghanshyamsinhji, K.C.S.I., Maharaja Saheb; *b.* 1889; *Suc.* father 1911. *Educ.*: in England with private tutors under guardianship of Sir Charles Ollivant. *Address*: Dhrangadhra, Kathiawar.

DICK, George Paris, C.I.E., Bar-at-Law; Member of C. P. Legislative Council, 1921, and of each preceding Council; Govt. Advocate, C. P.; *b.* 1866. *Educ.*: Dulwich College; called to Bar, Middle Temple, 1889; Advocate of Calcutta High Court, 1893; of the Judicial Commissioner Court, Nagpur, 1891; Lecturer in Law to the Morris College, Nagpur. *Publication*: Filch and His Fortunes. *Address*: The Kothi, Nagpur.

DINAJPUR, Maharaja Jagadish Nath Ray Bahadur; *b.* 1894. *s.* by adoption to Maharaja Sir Girija Nath Ray Bahadur, K.C.I.E.; *m.* 1916. *Educ.*: Presidency College, Calcutta. President, Dinajpur Landholders' Association; Municipal Commissioner; Member, Dist

Board, Dinajpur, and Member, British Indian Association; Bengal Landholders' Assocn., Asiatic Society of Bengal, East India Assocn., London, Calcutta Literary Society, North Bengal Zamindars' Assocn., Bangiya Sahitya Parishat. *Address:* Dinajpur Rajbati, Dinajpur.

DOBBS, SIR HENRY ROBERT CONWAY, K.C.I.E. (1921); C.S.I., C.I.E., F.R.G.S., I.C.S.; Foreign Sec. to the Govt. of India since August, 1919. *b.* 26 Aug. 1871; *m.* Esme, *d.* of George Rivaz, Esq., 1907. *Educ.*: Winchester College; Brasenose College, Oxford. Entered I.C.S., 1892; Private Secretary to Lieut.-Governor, U. P., 1896-99; in Political Service in Mysore and Baluchistan, 1899-1901; investigated navigation of Euphrates; from latitude of Aleppo to Baghdad, 1902-2 Consul for Seistan and Kain, 1903; British Commissioner, Russo-Afghan Boundary, 1903-4, during which period was on duty at Herat and neighbourhood; traversed unexplored tract of Hazarajat between Herat and Kabul, 1904; returned to Kabul as Secretary to Kabul Mission, 1904; Famine Commissioner, Rajputana, 1905; Dy. Sec., Foreign Dept., 1906; Resident and Consul-General, Turkish Arabia, Judicial Commissioner, N. W. F. P. 1914; Oct. 1914; Political Officer with Mesopotamian Force supervising Civil Administration of Territories in British Occupation, Jan. 1915-Aug. 1916; Revenue and Judicial Commissioner, Baluchistan, Apr. 1917; A.G.G. and C.C., Baluchistan, Decr. 1917; Foreign Secretary to the Govt. of India, Septr. 1919; Chief British Representative, Indo-Afghan Conference, April 1920; Head of the Mission to Afghanistan, 1921. *Address:* Simla and Delhi.

DONALD, DOUGLAS, C.S.I., (1921); C.I.E.; Commandant, B.M. Police and Samana Rifles. *b* 1865; *Educ.*: Bishop Cotton School, Simla. Joined the Punjab Police Force at Amballa, 1888; transferred to Peshawar, 1889; appointed C.B.M. Police, Kohat, 1890; served Miranzai Expeditions, 1891, on Samana posts and Tirah, re-transferred to Kohat, 1899; on special duty to raise Samana Rifles. *Address:* Military Police, Kohat.

DONALD, HON. SIR JOHN STUART, K.C.I.E., C.S.I., C.I.E.; *b.* 1861; *Educ.*: privately; Bishop Cotton School, Simla. Appointed Extra Assistant Commissioner, 1882; Assistant Commissioner, 1890; promoted for service in Gomal Pass and with Sherani Expedition in charge of Gomal Pass, 1890-93; accompanied mission to Kabul under Sir H. Durand, 1893; on special duty N.W. Frontier, and British Commissioner, for Demarcation of Kurram-Afghan boundary, 1894; Political Agent of the Tochi, and Deputy Commissioner of Bannu, 1899-1903; served Mahsud-Wazirs; Chief Political Officer with force against Kabul Khel Wazirs and Gumati, 1902; British Representative on Indo-Afghan Commission, 1903; Resident in Waziristan, 1908; British Commissioner, Anglo-Afghan Commission for Settlement of Border Disputes, 1910; Chief Commissioner and Agent to the Governor-General in the N.W. Frontier Province, 1913-15; appointed an Additional Member of the Imperial Legislative Council of India, 1916. *Club:* East India United Service.

DORNAKAL, BISHOP OF, since 1912; RT. REV. VEDANAYAKAM SAMUEL AZARIAH [1st Indian bishop, Hon. LL.D. (Cantab); *b.* 17 Aug. 1874; *Educ.*: C. M. S. High School, Mengnanapuram; C. M. S. College, Tinnevelly; Madras Christian College. One of founders of Indian Missionary Society of Tinnevelly, 1903; Hon Secretary, 1903-9; Hon. Gen. Secretary of National Missionary Society of India, 1906-9; visited Japan as Delegate of World Student Christian Federation, 1907, and its Vice-President, 1909-11; visited England as Delegate to World's Missionary Conference, 1910; Head of Dornakal Mission, 1909-12. *Publications*: Holy Baptism, Confirmation, First Corinthians, etc. *Address:* Dornakal Singareni Collieries, Deccan

DRAKE-BROCKMAN, SIR HENRY VERNON, Kt., M.A., LL.M.; Barrister-at-law; Judicial Commissioner, Central Provinces, since 1906; *b.* Madras, 8 Nov. 1865; *m.* 1888, I. M., *d.* of A. G. Faichnie. *Educ.*: Charterhouse; St. Peter's College, Cambridge. First-class Law Tripos, 1886; went to India, 1886; Under-Secretary to the Chief Commissioner, C.P., 1890 and 1892; Commissioner of Excise, 1892-94; Deputy Commissioner, Wardha, 1895; Divisional and Sessions Judge, Nerbudda, 1896-1901; Deputy Commissioner, Raipur, 1901-3; officiated as Judicial Commissioner, 1903, 1905 and 1906. *Address:* Nagpur, C.P.

DU BOULAY, SIR JAMES HOUSSEMAYNE, K.C.I.E., C.I.E., C.S.I.; *b.* 1868; *s.* of late Rev. J. T. H. Du Boulay, Housemaster at Winchester: *m.* 1901, Freda Elais, *d.* of Alfred Howell. *Educ.*: Winchester; Balliol College, Oxford. Entered I.C.S., 1889; Deputy Municipal Commissioner on Plague Duty, Bombay, 1897-1900; acted as Private Secretary to Lord Northcote, Governor of Bombay, 1901; to Lord Lamington, Governor of Bombay, 1903-7; Secretary to Government, Bombay, 1909; Private Secretary to Viceroy (Lord Hardinge), 1910-16; Secretary to Govt. of India, Home Department, 1916. Member, Indian Jails Committee, 1919. *Address:* C/o the National Bank of India, Bishopsgate, E. C.

DUNDAS, ROBERT THOMAS, C.I.E.; Inspector-General of Police, Bihar and Orissa, since 1914; additional Member of Lieut.-Governor's Council. *b.* 1868, *e. s.* of the late Donald William Dundas. *Address:* Bihar.

EBRAHIM, SIR CURRIMBHOY, 1st Baronet; *s.* of late Ebrahimbhoy Pabaney, Shipowner; *b.* Oct. 25, 1839; sometime a Trustee of Port of Bombay, and Pres. of the Anjuman-I-Islam and of Mahomedan Educational Conference in Bombay; leading member of the Khoja community; J.P. of Bombay; Vice-Pres. of All India Moslem League; Merchant and Millowner; interested in many charitable institutions; Kt., 1905; *m.* 1st, 1854, Foolbai, *d.* 1875, *d.* of Assobhai Ganji of Bombay; 2ndly, 1876, Foolbai, *d.* of Vishram Sajan of Bombay. *Address:* Pabaney Villa, Warden Road, Bombay.

EDWARDS, THE HON. MAJOR-GENERAL SIR WILLIAM RICE, K.C.I.E. (1921); C.B. (1914), C. M. G. (1900), King's Hon. Physician, 1917;

M. D., F. R. C. S. Director-General, Indian Medical Service, since 1918. *b* 17 May, 1862. *m.* Nellie, *d.* of Lt.-Col. R. Dewar, R. A., 1919. *Educ.*: Clifton College. Entered I. M. S., 1886; served on Lord Roberts' staff, 1890; Services lent to War Office, 1900; joined Lord Roberts in S. Africa as Surgeon to Headquarters staff (despatches, Queen's medal 5 clasps, C. M. G.), Superintending Surgeon, Kashmir State Hospitasl, 1901; Chief Medical Officer, N. W. F Provinces, 1910; Surgeon-General, Bengal, 1915-1918. *Address*: United Services Club, Simla.

EESTERMANS, DR. FABIAN ANTHONY, O.C, Catholic Bishop of Lahore, since 1905; *b.* Belgium, 1858. *Educ.*: Episcopal Seminary; Hoogstraten; studied Philosophy at Mechlin joined the Capuchin Order at Enghien, 1878; ordained Priest, 1883; Professor in Apostolic Seraphic School at Bruges, 1885-9; came to India, 1889. *Address*: Lawrence Road, Lahore.

EGERTON, SIR BRIAN, K.C.I.E., C.I.E.; In H.H. Nizam's service; *b.* 1857; *s.* of late Major-General C. R. Egerton. *Educ.*: Cheltenham College. Entered Punjab Police, 1879; served Afghan War, 1880-81. *Address*. Secunderabad Deccan.

ELIOTT, LT.-COL. FRANCIS HARDING, C.S.I., I.A.; Commissioner, Irrawaddy Division, Burma, since 1911; *b.* 1862. *Educ.*: Harrow. Entered army, 1881; joined Indian Army, 1885; Burma Commission, 1888; Lt.-Col., 1907; served Burma, 1888-9. *Address*: Irrawaddy Division, Burma.

EVANS, COL. GEORGE HENRY, C.I.E., C.B.E, V.D., F.L.S.; Superintendent, Civil Veterinary Department, Burma; *b.* 1863. *Educ.*: Rathmines School, Dublin; Royal Veterinary College, London. Entered Army Veterinary Dept., 1884; Lt.-Col, 1908; Colonel, 1913; served with Chin-Lushai Expn., 1889-90. *Address*: Pegu Club, Rangoon.

EVERSHED, JOHN, F.R.S., F.R.A.S., Director, Kodaikanal and Madras Observatories since 1911; *b.* 1864. Assistant Director, Kodaikanal and Madras Observatories, 1906; discovered radial movement in sunspots, 1909; visited New Zealand to select site for Cawthron Observatory, 1914; undertook astronomical expedition to Kashmir, 1915. *Address*: The Observatory, Kodaikanal.

EWENS, STANLEY R. (Adopted Indian name, Jaya Veera) Colonel, Salvation Army. Acting Territorial Commander for Western India Territory, which includes all the Army's work in Bombay Presidency. *b.* 15th Feb. 1867. Became an officer of the S. A in 1884 (out of Notting Hill, London). Has previously done S.A. service in South America, Ceylon and Great Britain and as under Foreign Secretary at the Army's International Headquarters and held important positions at the S. A. National Headquarters, London. *Address*: The Salvation Army Western India Territorial Headquarters, Morland Road, Byculla, Bombay.

EWING, REV. J. C. R., M.A., D.D., LITT. D., LL.D., C.I.E.; Secretary, Council of the Presbyterian Missions (U. S. A.) in India; Principal, Forman Christian College, Lahore, 1888-1918; Vice-Chancellor, Punjab University 1910-17; *b.* Pennsylvania, U. S. A., 23rd June, 1854. *Educ.*: Washington and Jefferson, U. S. A., came to India, 1879. *Address*: Lahore.

FAGAN, SIR PATRICK JAMES, K.C.I.E., C.S.I.; Financial Commr., Punjab, since 1916; *Educ.*: Blundell's School, Tiverton; St. John's College, Cambridge. Entered I.C.S., 1887. *Address*: Lahore.

FAIRBROTHER, COL. WILLIAM TOMES, C.B., F.R.G.S.; I.A.; *b.* 1856; Entered army, 1875; Lt.-Col., I.A, 1901; Brevet-Col. 1904; served Afghan War, 1878-80; Sikkim Expn, 1888; N.E. Frontier, Assam, 1894; Chitral 1895; Waziristan, 1901-2; was Commandant, 13th Rajputs, 1898-1905. *Address*: Bareilly, Srinagar.

FAIYAZ ALI KHAN, NAWAB, SIR MUMTAZUD-DOWLAH, MAHOMED, OF PAHASU, K.C.V.O., K.C.I.E., C.S.I.; Prime Minister at Jaipur. *b.* 1851; *s.* of late Nawab Sir Faiz Ali Khan Bahadur. Served for fourteen consecutive terms on U. P. Leg. Council and for two years on Imp. Council. President of Board of Trustees, M.A.O. College, Aligarh; trustee, Government College, Agra, and Lady Dufferin Fund, etc. *Address*: Nawab's House, Jaipur, Rajputana.

FANE, MAJ.-GEN. SIR VERE BONAMY, K.C.B. (1921), K.C.I.E. (1918), C.B, C.I.E., I.A. G.O.C Burma Independent District. *b* 1863, *m.* 1891, Kathleen Emily, *d.* of late J. Barratt. *Educ*: Privately Woolwich. Entered army from Militia, 1884; Joined I. A., 1888; served Waziristan, 1894-95; Tochi F. F., 1897-98,; D.A.A.G. 1st Brigade, Tirah, 1900; D A. Q. M. G. Cavalry Brigade, China, 1901-02; Chief of Police, N.W.F., 1908; Mohmand, commanded troops from Bannu and N. W. Militia at decisive action near Dirdoni, Tochi, 26th March 1915. Commanded 7th Meerut Division in Mesopotamia, Palestine and Syria and was first British General to enter Baghdad, 11th March, 1917. Six times mentioned in despatches, promoted Maj.-Gen. for distinguished conduct in the field, received Croix de Guerre and Order of the Nile (2nd class). *Address*: Maymyo.

FARIDKOT, H. H. Farzand-i-Saadat Nishan Hazrat-i-Kaisar-i-Hind, Brar Bansi, Raja Har Indar Singh Bahadur of, *b.* 1915, *s.* in 1919 Rules one of the Sikh States of the Punjab. *Address*: Faridkot, Punjab.

FARIDOONJI JAMSHEDJI, NAWAB SIR FARIDOON JUNG FARIDOON DAULA, FARIDOON MULK BAHADUR, K.C.I.E., C.S.I., C.B.E.; Member Extraordinary, H. E. H. the Nizam's Executive Council. *b.* 1849. *Address*: Saifabad, Hyderabad, Deccan.

FATEH ALI-KHAN, HON. HAJEE, NAWAB KIZILBASH, C.I.E.; *b.* 1862. *S.* to headship of Kizilbashes, 1896. Placed himself and his great clan at disposal of Government for Chitral campaign, and induced many of tribes across border to adopt attitude of pacific non-intervention. For this service, received 3,000 acres of land in Chenab Canal Colony for settlement of his followers; has served on Punjab Legislative Council; representative of

Punjab at Famine Conference, 1897; Life President of Anjumani-Islamia, Lahore, and Imamia Association of Punjab; a Counsellor of Aitchison Chiefs' College, Lahore; Fellow of Punjab University; Trustee of Aligarh College; *Heir: s.* Nisor Ali Khan. *Address:* Aitchison Chiefs' Coll., Lahore.

FAWCETT, THE HON. MR. JUSTICE CHARLES GORDON HILL, Judge, High Court, Bombay, since April 1920. *b.* 28 June 1869. *Educ.:* Harrow, Pembroke Coll., Cambridge. Entered I.C.S., 1888. Under Sec. to Govt. of Bombay, 1898. Acting Remembrancer of Legal Affairs, 1899. Remembrancer and Sec. to Govt., 1904. Additional Judicial Commr. Sind, 1914. Judicial Commr., Sind, 1918. *Address:* The Ridge, Malabar Hill, Bombay.

FELL, SIR GODFREY BUTLER HUNTER, K.C.I.E., C.S.I., C.I.E., Sec. to the Govt. of India, Army Dept., 1921. *b* 1872 *m.* 1904, Janet Camilla, *o. d*, of Gen. Sir D. J. S. McLeod. *Educ.:* Eton; Magdalen College, Oxford. Entered I.C.S., 1894; Under Sec. to Burma Govt., 1899; Private Sec. to Lieut.-Gov., 1903; Depy. Sec., Home Dept., Govt of India, 1906-09; Sec. to the Govt of Burma 1912-14; Financial Adviser, Military Finance Dept, Govt of India, 1915-19; Member of the Army in India committee, 1919-20. *Address:* Simla or Delhi.

FERGUSSON, JOHN CARLYLE, Comr., N. India Salt Revenue, since March 1920. *b.* 17 June, 1872. *m.* Muriel, *d.* of Wm. Anderson of Hallyards, Peeblesshire. *Educ.:* St. Paul's School and Trin. College, Oxon. Entered I.C.S., 1895. Under Sec. to Government of India (Home Department), 1904. *Address:* Agra or Simla.

FRENCH-MULLEN, MAJOR JOHN LAWRENCE WILLIAM, C.I.E.; Commandant, Myitkyina Gurkha Rifle Battalion, Burma Military Police; 13th Duke of Connaught's Lancers (Watson's Horse), I.A.; *b.* 1868; *Educ.:* The Oratory School, Edgbaston. Joined army, 1887; I.A., 1889; served Kachin Hills, 1893; commanded Military Police Escort to the Burma China Boundary Commission, 1898, 1900; commanded Military Police Column which entered Pienma N.E.F., 1910. *Address:* Myitkyina, Upper Burma.

FILOSE, LT.-COL. CLEMENT, M.V.O.; Military Sec. to Maharaja of Gwalior, since 1901; *b.* 1853. *Educ.:* Carmelite Monastery, Clondalkin; Carlow College. Entered Gwalior State service, 1872; Lt.-Col., 1903; Assistant Inspector-Gen., Gwalior Police and General Inspecting Officer, 1893-97; A. D. C. to the Maharaja Scindia, 1899-1901. *Address:* Gwalior.

FIRMINGER, VEN. WALTER K., F.R.G.S.; Archdeacon of Calcutta, since 1914; Editor of the Indian Churchman, 1900-05; Chaplain on Indian Establishment; *b.* 1870; *Educ.:* Lancing and Bury St. Edmunds; Merton Coll., Oxford., D.D., L.B.; Honour School of Modern History. Ordained Deacon at Hereford, 1893; Priest in Mombasa, 1895; Sub-dean of Zanzibar, 1896; present at bombardment. Government of India Historical Records Commission; Editor of Bengal Past and Present, 1907-19; Editor, Bengal District Records. *Address:* St. John's House, Calcutta.

FOSBERY, ARTHUR CHAMPAGNE WIDENHAM, M.I.C.E.; Ch. Engr., Bombay Port Trust, since 1919. *b.* 12 June, 1868. *m.* Ethel Byrne Thomson. *Educ.:* Privately. Served as pupil under G. Fosbery Lyster, Ch. Engr., Mersey Docks and Harbour Board, 1885-88, and continued to serve under that Board until 1892 when joined Bombay Port Trust as an Assist. Engr. Appointed Dy. Chief Engr., 1914. *Address:* Dougall House, Dumayne Road, Colaba, Bombay.

FOULQUIER, RT. REV. EUGENE CHARLES, Vicar Apostolic of Northern Burma and titular Bishop of Corydallus, since 1906; *b.* 1866. *Address:* Mandalay.

FOWLER, MAJOR-GENERAL FRANCIS JOHN, C.B., 1916; D.S.O., 1889; G.O.C. Sind-Rajputana district; *b.* 31 July 1864; *m.* 1896, May, *e. d.* of Colonel S. C. Sartorius, C. B. of Thorwald, Godalming. Served Zhob Valley, 1884, Burma 1887-1888 (despatches, D.S.O., medal with clasps); Uganda, 1897-98 (despatches, medal with two clasps, brevet of Major); China, 1900-1 (medal); East Africa (Somaliland), 1908-10, commanding troops (medal with clasp). *Address:* Karachi

FRASER, SIR HUGH STEIN, KT., Partner in firm of Gordon Woodroffe of Madras; *b.* 5 March 1863; *m.* 1904, Fanny Louise, *d.* of late John Bisdee Fawcett. *Educ.:* Blackheath Proprietary School; Rugby. A Member of Madras Port Trust for several years; additional Member of Council, Madras, 1910, 1911, 1914, 1915; Chairman, Chamber of Commerce, Madras, 1910, 1911, 1914; Director of Bank of Madras; Sheriff of Madras, 1915. *Address:* Madras.

FREELAND, MAJOR-GEN. SIR HENRY FRANCIS EDWARD, K. C. I. E. (1920); C. B. (1917); M.V.O. (1911); D.S.O. (1916), Officer of the Legion of Honour. Agent, B. B. and C. I. Railway. *b.* 29 December 1870. *m.* Ethel Louise, *d.* of Col. T. Malcolm Walker, R. A. Entered R. E. 1891. Served in Chitral, with China Expeditionary Force and in European War. *Address:* Bombay.

FREMANTLE, SELWYN HOWE, C S I. (1919), C.I.E. (1915), V. D. (1918), I.C.S. *b.* 11 August 1869. *Educ.:* Eton and Magdalen College, Oxford. *m.* Vera, *d.* of Henry Marsh, C.I.E., late Ch. Engineer, P. W. D. Irrigation Branch, U. P. *Publications:* Settlement Reports, Rai Bareli District (1896), Bareilly District (1902); A Policy of Rural Education (1915). *Address:* Board of Revenue, Lucknow.

FRENCH, LEWIS, C.I.E., C.B.E., 1919; Financial Secretary (1920); *b.* 26 October 1873; *Educ.:* Merchant Taylor's School; St. John's College, Oxford. Assistant Commissioner, Punjab, 1897; Colonisation Officer, Chenab Colony, 1904-06; Director, Land Records, 1906, Director, Agriculture, 1907; Deputy Commissioner, Shahpur, 1908; Chief Minister, Kapurthala State, 1910-15; Special Commissioner, Defence of India Act, 1915; Director, Land Records, 1915; Additional Secretary, Punjab Govt., 1916-18; Ch. Secretary, 1918-19; Addl. Secretary, 1919; and Chief Secretary, 1919-1920; Member, Punjab Leg. Council. *Address:* Lahore.

FROOM, THE HON. SIR ARTHUR HENRY, KT. (1922); Member of Council of State. *b.* 15 Jan. 1873. *Educ.:* St. Paul's School. *m.* Effie Bryant, second *d.* of the late Thomas Bryant, F.R.C.S. Entered service of P. & O. S. N. Co. 1890. Superintendent, Bombay, 1912. Partner, Mackinnon Mackenzie & Co. 1916. Trustee, Bombay Port, since 1912. Chrmn., Bombay Ch. of Commerce, 1920. Member, Imp. Leg. Council, April 1920. *Address:* Pedder Road, Bombay.

FYSON, PHILIP FURLEY, M A. (Cantab.). F.L.S.; Professor of Botany, Presidency Coll., Madras, since 1904. *b.* 1877, *m.* Diana Ruth Wilson, 1914. *Educ.:* Loretto School; Sidney, Sussex College, Cambridge; Science master, Aldenham Grammar School, 1901-2; Assistant to Professor of Botany, Univ. Coll., Aberystwyth, 1902-3; Assistant at Aynsom Agricultural Station, 1913-4. *Publications:* "Flora of the Nilgiri and Pulney Hill-tops, Vol. I and II (1915), Vol. III 1920;" "Botany for India"; *Editor*:—Journal of Indian Botany. *Address.:* Presidency College, Madras.

GAGE, ANDREW THOMAS, M.A., B.Sc., M B., F.L.S.; Lt.-Col., I.M.S.; Director, Botanical Survey of India; Supdt., Royal Botanic Gardens, Calcutta, since 1906; *b.* 1871; *Educ.:* Grammar School, Old Aberdeen; University of Aberdeen; Assistant to Professor of Botany, University of Aberdeen, 1894-96; entered I.M.S., 1897; Curator of Herbarium, Calcutta Botanic Gardens, 1898. *Address:* Royal Botanic Gardens, Calcutta.

GANDHI, MOHANDAS KARAMCHAND, Bar.-at-law (Inner Temple). *b.* 2nd October 1869. *Educ.* at Rajkote, Bhavnagar, and London. Practised law in Bombay, Kathiawar, and South Africa. Was in charge of an Indian ambulance corps during the Boer War and the Zulu revolt in Natal. During the great war raised an ambulance corps and conducted a recruiting campaign in Kaira district. Started and led the Satyagraha movement (1918-19) and the non-cooperation campaign (1920) in addition to associating himself with the Khilafat agitation (1919-21). Has championed the cause of Indians abroad, notably those in South and East Africa. *Publication:* "Indian Home Rule," "Universal Dawn." *Address:* Satyagrah Ashram, Sabarmati.

GANGA RAM, C.I.E., M.V.O., Ral Bahadur, M.I.M.E., M.I.C.E.; *b.* 1851. *Educ.:* Thomason College. Entered P. W. D., 1873; Executive Engineer, 1883; Supdt., Coronation Durbar Works, Delhi, 1903; retired, 1903; Supdtg. Engineer, Patiala State; retired, 1911; Consulting Engineer, Delhi Durbar, 1911. *Address:* Lahore.

GEBBIE, FREDERICK ST. JOHN, C.I.E., (1920), Insp.-Gen. of Irrigation since 1921. *b.* 7 Aug. 1871. *Educ.:* Edinburgh Collegiate School, Edinburgh Univ. and R.I.E. College. Joined P. W. D. as Assist. Engr., 1893; Exec. Engr. 1899; Suptg. Engr., 1912. Acted Chief Engr. in Sind and Sec. Indus River Commn., 1915. Chief Engr. and acting Sec. to Govt. of Bombay, 1916; Sec. to Govt. Bombay, 1916. Chairman, Nile Projects Commission, 1920. *Address:* Simla.

GEOGHEGAN, LT.-COL. FRANCIS EDWARD, C.I.E. Director of Supplies, G. H. Q., India. *b.* 14 August, 1869. *Educ.:* St. Charles College and R. M. C. Sandhurst: *m.* Miss L. L. Munn; 2nd Lt., Gloucestershire Regiment, 1889, Indian Army, 1891. Served in N. W. Frontier Campaign, 1897; China, 1900; European War, 1914-18 (despatches). *Address:* C/o. Messrs. King, King & Co., Bombay.

GEORGE, EDWARD CLAUDIUS SCOTNEY, C.I.E.; Dy. Commissioner, Ruby Mines, Burma, *b.* 1865. *Educ.:* Dulwich College. Asst. Commissioner, 1887-90; Officiating Dy. Commissioner, Bhamo, 1890-97; Sub-Commissioner, Burmo-China Boundary Commission, 1897-99. *Address:* Ruby Mines, Burma.

GHOSAL, MRS. (SRIMATI SVARNA KUMARI DEVI); *d.* of Maharshi Debendra Nath Tagore, and sister *of* Sir Rabindranath Tagore; *b.* 1857; *m.* late J. Ghosal, Zemindar. Before twenty published a novel anonymously; soon after became editor of Bharti (first woman editor in India), a Bengali magazine which she still conducts. *Address:* Old Ballygunge Road, Calcutta.

GHOSE, THE HON. MR. JUSTICE CHARU CHUNDER, Judge, Calcutta High Court, since July, 1919. *b.* 4 February 1874. *Educ.:* Presidency College, Calcutta; *m.* Nirmal Nolini, *d.* of the late Protap Chunder Bhose. Vakil, Calcutta, 1898. Called to the Bar in England, 1907. *Address:* High Court, Calcutta.

GIBBES, REGINALD PRESCOTT, Govt. Emigration Agent for all British Colonies at Calcutta, since 1914. *b.* 1867. *Educ.:* St. Edward's School, Oxford. Germany; France; Italy; Spain. Entered Col. C. S., 1889; Cadet, Straits Settlements, transferred to Calcutta, 1900, as Assist. Emigration Agent for Trinidad, Fiji, Jamaica, and Mauritius. Emigration Agent, 1903. *Address:* 61, Garden Reach, Calcutta.

GIBBONS, THOMAS CLARKE PILLING, K.C.; 1913, Advocate-General, Bengal, since 1917. *b.* 1868. Admitted a Solicitor, 1891; called to Bar; Inner Temple, 1897. *Address:* High Court Calcutta.

GIDHOUR, MAHARAJ KUMAR CHANDRA MOULESSHUR PRASAD SING; *S. & H.* of Maharaja Sir Ravneswar Prasad Sing Bahadur of Gidhour. *b.* 1890. *m.* 1913. Member, District Board; Vice-Chairman, Local Board. *Address:* Gidhour, Monghyr, Behar.

GIDHOUR, MAHARAJAH SIR RAVNESWAR PRASAD SINGH, BAHADUR OF, K.C.I.E.; premier nobleman in Bihar and Orissa. *b.* 1860 *m.* 1886. Member of Bengal Leg. Council, 1893-95 and 1895-97. 3rd time, 1901-03; 4th time, 1903. Life Vice-President, B.L. Association; title of Maharajah Bahadur made hereditary, 1877. Hon. Member of Leg. Council of new Province, 1913. *Address:* Gidhour, Monghyr, Behar.

GIDHOUR, MAHARAJ KUMAR CHANDRAMOULESWAR PRASAD SINGH, M.L.C. *b.* 1890. Member, Legislative Council, Bihar and Orissa, of Dist. Board, Monghyr, Hon. Magte., Gidhour Independent Bench. Installed on the *gadi.*

Managing Proprietor of the Raj *Address.* Gidhour, Monghyr, Behar.

GIDNEY, HENRY ALBERT JOHN, LT.-COL., I.M.S. (retired); F.R.C.S.; F.R.S.; D.O., (Oxon.); D. P. H. (Cantab.); J. P. M.L.A. Ophthalmic Surgeon, *b.* 9 June 1873; *Educ.;* at Calcutta, Edinburgh R. College, University College Hospital, London, Cambridge and Oxford. Entered I.M.S., 1898. Served in China Expedition, 1900-01; N. E. Frontier, 1913; N. W. Frontier, 1914-15 (wounded). *Publications*; numerous works on Ophthalmic Surgery. President, Anglo-Indian and Domiciled European Association; Municipal Councillor, Bombay Corporation; Mem. of Legislative Assembly. *Address*: Simla and Delhi.

GIFFARD, MAJ.-GENERAL GERALD GODFRAY, C.S.I., M.R.C.P., M.R.C.S.; Surgeon-General with the Government of Madras; Honorary Surgeon to H. M. the King. *b.* 1867. *Educ.*: St. Bartholomew's Hospital. Captain I.M.S., 1890; Lt.-Col., 1910; Resident Surgeon, General Hospital, Madras, 1897; Sanitary Officer, Chingleput, 1899; Professor, Materia Medica, Medical College, 1901, Professor, Surgery, 1903. Served European war, Commandant, Hospitalship Madras, 1915-17, President of the Madras Medical Council; Chairman, St. John Ambulance Assocn. South Indian Provincial Centre, Madras. *Address*: 81, Mount Road, Cathedral Post, Madras.

GILLAN, SIR ROBERT WOODBURN, K.C.S.I., C.S.I.; *b.* 1867; *m.* 1889, Mary *o. d.* of Wm. van Bearle. *Educ.*; Ayr.: Christ's College, Cambridge. Joined I. C. S., 1888; attached to U. P., filling executive and chiefly revenue posts. Sec. to the Board of Revenue, 1902; Fin. Sec. to Govt., 1907. Comptr. and Aud. Gen., 1910. Fin. Sec. to the Govt. of India, 1912. Member of Royal Commission on Indian Finance and Currency, 1913. Member, Railway Board, 1914, and President, 1915. (Retired) *Address:* Whitehead Cambridge.

GILLUM, SIDNEY JULIUS, Managing Director The Bombay Company, Ltd., *b.* 1 July 1876. *m.* Dorothea *d.* of C. S. Smith, some time H. M. Consul-General at Barcelona. *Educ.*: Winchester and King's Coll. Cambridge; 2nd Class Classical Tripos. Dy. Chrmn. Bombay Chamber of Commerce and additional member, Bombay Leg. Council, 1918-19. Presdt, Bank of Bombay, July-Decr. 1920. Sheriff of Bombay, 1921. *Address:* C/o. The Bombay Company Ltd., Bombay.

GILMORE, THE REV. DAVID CHANDLER, D.D., Professor of English, Judson College, Rangoon, *b.* 29 August 1866. *Educ.*: Rochester University U.S.A. *m.* Gertrude Price Clinton. Prof. in Judson College, 1890-96; Missionary at Tavoy and Henzada, 1897-1905; Prof. in Judson College, 1908-17. *Publications*: Elementary Grammar of Sgaw Karen; Harmony of the Gospel in Sgaw Karen; The End of the Law. *Address:* Rangoon.

GLANCY, REGINALD ISIDORE ROBERT, C.S.I. (1921), C.I.E., Finance Mem. of Council H. H. Nizam's Govt.; since 1911. *Educ.* Clifton College; Christ Church, Oxford Entered I.C.S., 1896; Settlement Officer Bannu, 1903. Political Agent, 1907 First Asst. Resident, Hyderabad, 1909 *Address*: Hyderabad.

GOLDIE, MAJ. KENNETH OSWALD, C.I.E. Mily. Secretary to the Governor of Madras, since 1919; *b.* 19 September 1882. *Educ.:* Wellington and R. M. C. Sandhurst. Commissioned 1901. Joined 10th Lancers, 1902. Extra A. D. C. to the Viceroy, 1908; A. D. C. to the Governor of Bombay, 1913-16. Served in Mesopotamia, 1916-19. *Address:* Government House, Madras.

GOLDSMITH, REV. MALCOLM GEORGE, Missionary of C.M.S. in Madras and Hydcrabad, Deccan; *b.* 1849. *Educ.:* Kensington Proprietary Grammar School; St. Catherine's College, Cambridge. Ordained, 1872; C.M.S. Missionary, Madras, 1872-73; Calcutta, 1874-75; Principal, Harris School, Madras, 1883-91; Hyderabad, 1891-99; Hon. Canon, St. George's Cathedral, Madras, 1905. *Address:* Royapet House, Royapettah, Madras.

GONDAL, His HIGHNESS THAKORE SAHEB OF, BHAGWAT SINHJEE, G.C.I.E., K.C.I.E.; *b.* 1865; *s.* of late Thakore Saheb Sagramji of Gondal; *m.* 1881, Nandkuverba, C. I., *d.* of H. H. Maharana of Dharampore. *Educ.:* Rajkumar Coll., Rajkot; Edin. Univ. Hon. LL. D. (Edin.) 1887; M. B. and C. M. (Edin.) 1892; M.R.C.P. (Edin.) 1892; D. C.L. (Oxon). 1892; M. D. (Edin.) 1895; F.R.C.P. (Edin.) 1895; F.C.P. and S. B. 1913; Fellow of University of Bombay, 1885; F.R.S.E., 1909; M.R.A.S., M.R.I. (Great Britain and Ireland). *Publications:* Journal of a Visit to England; A Short History of Aryan Medical Science. *Address:* Gondal, Kathiawar.

GOODIER, THE MOST REV. ALBAN, R.C. ARCHBISHOP OF BOMBAY since 1919, *b.* at Preston, 14 April, 1869. *Educ.:* Stonyhurst. Entered the Society of Jesus, 1887. Joined the staff of St. Xavier's College, Bombay, 1914. Rector and Principal of that College, 1916-1919. *Address:* Bombay.

GOUR, HARY SINGH, M. A., D.C.L., LL.D. Member of the Legislative Assembly. Barrister-at-law. *b.* 26 Nov. 1870. *Educ.* Govt. High School, Saugor; Hislop Coll. Nagpur; Downing Coll., Cambridge. Presdt. Municipal Committee, Nagpur. *Publications:* Law of transfer in British India, 3 vols. (4th Edition). Penal Law of British India. 2 vols. (2nd Edition) Hindu Code. *Address:* Nagpur, C. P.

GOURLAY, WILLIAM ROBERT, C.S.I., C.I.E., I.C.S.; Priv. Secy. to Gov. of Bengal, since 1912; *b.* 1874; *Educ.*: Glasgow University; Jesus Coll., Cambridge. Ent. I.C.S., 1897. Served in Bengal and Bihar; Registrar of Co-operative Credit Societies, 1905; Director of Agriculture, 1907; Magistrate and Collector, 1912. *Address.*: Govt. House, Calcutta.

GRACEY, HUGH KIRKWOOD, C.B.E. (1919), I.C.S; *b.* 23 November 1868. *Educ.:* City of London School; St. Katharine's College, Cambridge. *m.* Mabel Alice, *d.* of the late G. F. Barrill. Commissioner of Gorakhpur since 1916. *Publication*: Settlement Report of Cawnpore. *Address:* Gorakhpur, U. P.

GRAHAM, REV. JOHN ANDERSON, M.A. (Edin.), D.D. (Edin.), K.I.H. Gold Medal, C.I.E.; Missionary of Church of Scotland, at Kalimpong, Bengal, since 1889; Hon. Supt. of St.

Andrew's Colonial Homes; *b.* 1861. *Educ.:* Cardross Parish School; Glasgow; High. School; Edinburgh University. *m.* Kate McConachie (K.I.H. gold medal) who died 1919. Was in Home C.S. in Edinburgh, 1877-82; graduated, 1885; ordained, 1889. *Publications:* "On the threshold of three closed lands" and "The missionary expansion of the Reformed Churches." *Address:* Kalimpong, Bengal.

GRAHAM, ROBERT ARTHUR, C.S.I. (1921); Ag. Chief Secretary, Govt. of Madras. *Educ* Winchester and Brasenose College, Oxford. *m.* daughter of Sir James Thomson, K.C.S.I. Entered I.C.S., 1891; served in various executive, judicial and administrative capacities in the Madras Presidency. *Address:* Secretariat, Madras.

GRANT, SIR ALFRED HAMILTON, K.C.S.I. (1922), K.C.I.E., C.I.E.; *b.* 1872; 2nd *surv. s.* of late Sir Alexander Grant, 10th Bart. of Dalvey, and *heirpres.* to his brother. *Educ:* Fettes College Edinburgh; Balliol Coll., Oxford. Ent. I.C.S., 1895; served as Asst. Commsr., Junior and Senior Secy. to Financial Commr., in Punjab; Dy. Commr. of various Frontier districts, Secy. to Frontier Administration; accompanied Dane Mission to Kabul, 1904-5; Foreign Secretary, 1914-1918; British Representative at conclusion of peace with Afghanistan, 1919. Ch. Commr. N. W. F. Province, 1919-20. *Address:* Government House, Peshawar.

GREAVES, HON. WILLIAM EWART; Judge of Calcutta High Court, since 1914; *b.* 1869; *Educ.:* Harrow; Keble College, Oxford. Asst. Master at Evelyns, nr. Uxbridge, 1894-99; called to Bar, Lincoln's Inn, 1900 *Address:* 2, Short Street, Calcutta; 33, Marlborough Place, N. W.

GREGSON, LIEUT-COLONEL, EDWARD GEISON C.M.G., 1917; C.I.E., Supdt. of Police, N.W.F. Prov.; *b.* 1877. *Educ.:* Portsmouth Grammar School, Asst. Blockade Officer, Waziristan, 1900, Poll Officer, Mohamand Border, 1908; Commdt., Border Military Police, Peshawar, 1902-07; Per. Asst. to Inspr.-Gen. of Pol., N. W. F., 1907-9; on special duty Persian Gulf, 1909-12; Commissioner of Police, Mesopotamia. *Address:* Rake, Liss, Hants.

GREY, LT.-COL. WILLIAM GEORGE, I. A.; Pol. Dept., Govt. of India; Consul-Gen. for Khorassan, since 1916; *b.* Wellington, New Zealand, 1866. *Educ.:* Westward Ho, N. Devon. Joined army 1886; served Natal, Straits Settlements, and Gibraltar; transferred to I. A., 1889; transferred to Pol. Service as Vice-Consul, Bandar Abbas, 1902; served as Pol. Agent at Maskat, Oman, Arabia, 1904-8; permanently appointed to Poll. Dept., Govt. of India, 1906; Pol. Agent, Koweit, P. G., 1914-16; served in Mysore, Calcutta, and Baluchistan. *Address:* Meshed.

GRIFFITH, FRANCIS CHARLES, O.B.E. (1919), M.L.C., King's Police Medal (1916); Insp.-Gen. of Police, Bombay Presy, 1921. *b.* 9 November 1878; *m.* Ivy Morna, daughter of George Jacob, I.C.S., *Educ.:* Blundel's School, Tiverton. Joined Indian Police, 1898; Commr. of Police, Bombay, 1919-21. *Address:* Poona.

GRUNING, JOHN FREDERICK, C.I.E., 1915, Commissioner of Orissa. *b.* 1 October 1870; *m.* to Mabel Lydia (Baker). *Educ:* East bourne College, and St. John's College. Camb. Member of Legislative Council, Bihar and Orissa. *Publications:* Gazetteer of Jalpaiguri: A Pamphlet on Emigration to the Tea Gardens of Assam, Lalbagh, Cuttack, Orissa.

GUPTA, SIR KRISHNA GOVINDA, K.C.S.I., C.S.I.; Bar.-at-Law, Middle Temple, 1873; late I.C.S.; *b.* 1851. *Educ.:* Mymensing Govt School); Dacca Coll.; London University Coll. Joined I.C.S., 1873; passed through all grades in Bengal; Secy., Board of Rev. 1887; Commsr. of Excise, 1893; Divl. Commsr., 1901; Member to Board of Rev., 1904, being first Indian to hold that appointment; Member, Indian Excise Committee, 1905; on special duty in connection with Fisheries of Bengal, 1906; deputed to Europe and America in 1907 to carry on fishery investigation; nommated to Indian Council, 1907; being one of two Indians who were for first time raised to that position; retired from India Office on completion of term, March 1915.

GWALIOR, H. H. MAHARAJAH SCINDIA OF, G.C.V.O., G.C.S.I., G.B.E., Hon LL.D., Camb.; D.C.L. Oxon; Hon. and Extra A.D.C. to King; Hon. Col., 1st D. & O. Lancers, 1906. *b.* 20 Oct. 1876; S. 1886; made Hon. Col, British Army, 1898; Maj.-Genl; Lt.-General; went to China as Orderly Officer to General Gaselee, 1901; provided expedition with hospital ship; salute of 21 guns. Was chiefly responsible for the purchase and upkeep of the hospital ship Loyalty, 1914-18. *Address:* "; "Madho Bilas," Shivapuri, Gwalior, C. I.

HAFFKINE, WALDEMAR MORDECAI WOLFF, C.I.E.; Bacteriologist with Govt. of India; *b.* Odessa 15 (3) Mar. 1860. *Educ.:* Classical Coll., Berdiansk (Southern Russia), 1872-79; and Odessa University, Faculty of Science, 1879-83. Engaged research work at Zoological Museum, Odessa, 1883-88; Asst. Professor of Physiology, Geneva Medical School, Switzerland, 1888-89; Asst. to Pasteur, Paris, 1889-93; on bacteriological research duty, India, since 1893. Cameron Prize in Practical Therapeutics, University of Edinburgh, 1900; Mary Kingsley Medal, 1907; Academie des Sciences Prize, Paris, 1909. *Decorated* for research work in India. *Address:* Pasteur Institute, Paris; Govt. of India Biological Laboratory, Calcutta.

HAIG-BROWN, WILLIAM ALBAN, Banker (Partner, Messrs. King, King & Co., and King Hamilton & Co.), *b.* 31 May 1870. *Educ.* Winchester College. Continuously from 1888 in the employ of Henry S. King & Co., London, and King, King & Co., Bombay, until 1911, when became a partner. *Address:* Khatao Mansions, Wellington Lines, Bombay.

HAILEY, HAMMET REGINALD CLODE, C.I.E.; Director of Land Records and Agriculture, U.P. since 1912; Member of Lieut.-Governor's Council. *Educ.:* Merchant Taylor's School; St. John's College, Oxford. Entered I.C.S., 1892; Jt. Mag., 1899; Dy. Commsr., 1905; Jt. Sec., Board of Revenue, 1906. *Address* Oudh.

HAILEY, Hon. Sir William Malcolm, K.C.S.I., C.I.E.; I.C.S.; Finance Member, Government of India, 1919; Knight of Grace of Order of St. John of Jerusalem. *b.* 1872; *m.* 1896, Andreina, *d.* of Count Hannibale Balzani, Italy,. Lady of Grace of Order of St. John of Jerusalem; F.R.G.S. *Educ.:* Merchant Taylor's School; Corpus Christi College, Oxford (Scholar). Colonisation Officer, Jhelum Canal Colony, 1902; Sec., Punjab Govt., 1907; Dy. Sec., Govt. of India; 1908; Member, Durbar Committee, 1911; Ch. Commr., Delhi, 1912-19; Chairman, Executive Council, St. John Ambulance and Red Cross, India, 1920. Chairman, Indian Soldiers' Board, 1921. *Address:* Delhi and Simla.

HAKSAR, Lt.-Col. Kailas Narain, B.A., C.I.E., Mahsir-Khas-Bahadur; Pol. Member, Gwalior Durbar, since 1912; *b* 1878. *Educ.:* Victoria College, Gwalior Allahabad University; Hon. Prof. of History and Philosophy, 1899-1902; Priv. Sec. to Maharaja Scindia in 1903-12; Under Sec., Pol. Dept., on dep. 1905-7; Capt., 4th Gwalior Imp. Ser. Int., 1902; Lt.-Col., 1910; Sen. Member, Board of Revenue, 1910-13. *Address:* Gwalior.

HALL, Major Ralph Ellis Carr, C.I.E., I.A.; Mily. Accts. Dept., Field Controller, Poona; *b.* 1873. Joined army, 1894; Major, 1912; served Tirah, 1897-98; European War, 1914-17. *Address:* Field Controller, Poona.

HALLIDAY, Francis Charles Tollemache, M.V.O.; Dy. Commsr, Ind. Police. *Address:* Indian Police Headquarters, Calcutta.

HAMILTON, C. J., M.A., F.S.S.; Indian Educational Service, Prof. of Economics, Patna College; Fellow of Patna University. *b.* 1878, *Educ.:* private tutor; King's College, London; Caius College, Cambridge; graduated first class Moral Science Tripos, 1901; Member of Mosely Educational Commission to U.S.A., 1903; Member of Inner Temple, 1903; Dunkin Lecturer at Oxford University, 1912; Minto Prof. of Economics, Calcutta University, 1913-19. *Address:* Patna College, Patna.

HANKIN, Ernest Hanbury, M.A., Sc.D.; Chemical Examiner, U. P. and C. P., since 1892; *b.* 1865. *Educ.:* Merchant Taylor's School; Univ. Coll., London; St. Bartholomew's Hospital, London; St. John's Coll., Cambridge; Koch's Laboratory, Berlin; Institute Pasteur, Paris. *Address:* Agra.

HARCHANDRAI VISHINDAS, B.A., LL.B., C.I.E. (1918); Mem., Legislative Assembly Pleader, Zamindar and Landlord. *b.* Apr. 1862. *Educ.:* Elphinstone College, Bombay Elected Member, Karachi Municipality, 1888-1899; Legal Adviser, Karachi Municipality, 1899-1910; Again Elected Mem., Karachi Municipality, 1910-21; Pres, Karachi Municipality, 1911-1921; Elected Member, Bombay Leg. Council, 1910-1920; Chairman, Reception Committee, Indian National Congress, 1913; Pre., First Sind Prov. Confec. held at Sukkur 1908; Pres., Special Conference, Hyderabad on Reforms. *Address:* Lakhmidas Street, Karachi.

HARI KISHAN KAUL, Rai Bahadur Pandit, M.A., C.I.E.; Commissioner, Jullundur Divn. since Nov. 1920. *b.* 1869; *s.* of Raja Pandit Suraj Kaul, C.I.E., *Educ.:* Govt Coll., Lahore. Asstt. Commsr., 1890; Jun. Secy. to Financial Commsr., 1893-97; Settlement Officer, Muzaffargarh, 1898-1903; Mainwali, 1903-8; Dy. Commsr., 1906; Dy. Commsr. and Supdt., Census Operations, Punjab, 1910-12; Dy. Commsr., Montgomery, 1913; on special duty to report on Criminal Tribes, Dec 1913-April 1914; Deputy Commissioner for Criminal Tribes, 1917-19; Dy. Commissioner, Jhelum, 1919; Commissioner, Rawal Pindi Division, 1919-20. *Address:* Abbott Road, Lahore.

HARNAM SINGH, The Hon. Raja Sir, K.C.I.E.; *b.* 15 Nov. 1851; *y. s.* of late H. H. Raja Rajgan Sir Raja Randhir Singh, Bahadur of Kapurthala, G.C.S.I. *Educ.:* Kapurthala. Served as member of Hemp Drugs Commission in 1893-94; and is Hon. Life Secy. to B. I. Association of Talukdars of Oudh and Fellow of Punjab University, was member of Imp. Leg. Council and afterwards of Punjab Leg. Council 1900-2; Member of the Council of State since 1920. Member of the Central Committee of the Lady Dufferin Fund. Created Raja, 1907. *Address:* Simla or Lucknow or Jullundur City.

HARRIS, Leonard Tatham, C.S.I. (1921); Member, Board of Revenue, 1921. *Educ.:* Falmouth Grammar School; Bath College; New College, Oxford. Entered I.C.S., 1891; Dist. Magte. and Coll., Bangalore, 1899; Head Asst., 1902; Commissioner, Coorg, 1905-12, Collector and Agent, Vizagapatam 1912-16; Member, Board of Revenue, 1919; Agency Commissioner, 1920. *Address:* Chepauk, Madras.

HARRISON, Albert John, C.I.E., Manager, Meckla Nuddee Sawmills, Dibrugarh, Assam, since 1902; *b.* 1862; *Educ.:* Rugby; Harrow. Joined Jokai Tea Co. as Engineer, 1890; managed Tippuk Tea Garden, 1895-1902. *Address:* Dibrugarh, Assam.

HART, Sir George Sankey, K.B.E., C.I.E., Inspr.-Genl. of Forests to Govt. of India, since 1913; *b.* 1866. *Educ.:* St. Paul's School; Wren and Gurney; R.I.E. College, Cooper's Hill, Asst. and Dy. Conservator of Forests, Punjab, 1887-1906; Conservator of Forests, C. P., 1906-08; Bengal, 1908-10; Chief Conservator of Forests, C. P., 1910-13. *Address:* Simla.

HARTLEY, Lewis Wynne, C.I.E. (1918); Commissioner of Income Tax, Bombay; *b.* 1867; *m.* to Annie, *d.* of William Rowlands, Rofft, Bangor, Wales. Educated at private school. Assistant to Messrs. Gaddum Bytell & Co., Cotton Merchants, Bombay, 1889-1900. appointed Presidency Inspector of Factories, Bombay Presidency, Sind and Central Provinces, 1901; Collector of Income-Tax for the City and Island of Bombay, 1906. *Address:* Bombay Club, Bombay.

HARTNOLL, Sir Henry Sulivan, Kt.; Chief Judge, Court of Lower Burma, since 1906; Barrister, 1898. *Educ.:* Exeter Grammar School: Trinity College, Oxford. Entered I.C.S., 1881; served in Burma as Asstt.

Commissioner; Dy. Commissioner, 1890; Commissioner, 1902. *Address:* Chief Court, Rangoon.

HARTOG, PHILIP JOSEPH, C.I.E. (1917); Vice-Chancellor, Dacca Univ., since 1920. *b.* 2 March 1864. *m.* Mabel Helene, *d.* of H. J. Kisch. *Educ.*: Univ. College School; Owens College, Manchester; Univ. of Paris and Heidelberg; College de France. Asstt. Lecturer on Chemistry, Owen's College 1891-1903. Lecturer in Victoria Univ., Manchester, 1898-1903. Sec. to Mosely Commn. of Educational Inquiry, 1902-03. Sec. to Treasury Committee on Oriental Studies in London. 1907-09 and to India Office Committee on same subject, 1910-17. Crown member and Hon. Sec. of Governing Body of School of Oriental Studies, 1916; Member of Calcutta Univ. Commn. 1917-19; Academic Registrar, Univ. of London, 1903-20. Has published numerous works on educational subjects. *Address*: Ramna, Dacca.

HATCHELL, THE VEN. CHRISTOPHER FREDERIC WELLESLEY, Archdeacon of Bombay since 1920. *b.* 24 February 1868. *Educ.:* Bedford School and Christ's College, Cambridge. *m.* Ella D'Arcy, *d.* of the late Captain G. B. Kirwan. Ordained 1891. A. C. S., Bhusawal, 1896. Bombay Ecclesiastical Department, 1900-08. Madras, 1908-17. Bombay, 1917. *Address:* 23, Waudby Road, Bombay.

HATWA, MAHARAJA BAHADUR GURU MAHADEV ASRAM PRASAD SAHI OF; *b.* 19 July 1893; *S.* Oct. 1896 to the *Gadi* after death of father Maharaja Bahadur Sir Kishen Pratap Sahi, K.C.I.E., of Hatwa. *Address:* Hathuwa P. O., District Saran, Behar and Orissa.

HAY, COLONEL WESTWOOD NORMAN, C.I.E., D.S.O., I. A.; Embarkation Commandant, Bombay. *b.* 1871., *m.* Jan. 1899. Violet, 3rd *d.* of A. W. Cowdell, Esq. *Educ.*: at Haileybury. Entered R. A., 1891; Major, 1909; D.A.A.G., India, 1909; served China, 1900. General Staff 1920-11, India 1917; East Africa 1917-18; S. Afghanistan 1919; Zhob Force 1919; Wazir Force 1920-21. *Address*: 1 Carnegy Road, Bombay.

HAY, SIR LEWIS JOHN ERROLL; 9th Bt. of Park, *cr.* 1663; Indigo Planter; *b.* Stirling N.B., 17 Nov. 1866; *e. s.* of 8th Bt. and *d.* of John Brett Johnston of Ballykilbeg, Co. Down; *S.* father 1889; *Address:* Dooriah, Motipur, Behar.

HAY, ALFRED, D. Sc.; Professor of Electrical Technology, Indian Institute of Science, Bangalore; *b.* Russian Poland, 1886; *Educ.:* School education received at one of Warsaw "Gymnasia." University of Edinburgh, B. Sc., 1891; studied electrotechnology in London under the late Prof. Ayrton at Central Technical College; Demonstrator in Electrical Engineering at Univ. Coll., Nottingham, 1892; Lecturer on Electro-Technics at Univ. Coll., Liverpool, 1896-1901; graduated D. Sc., 1901; Professor of Electro-Technology, Cooper's Hill, 1901-04; Head of Physics and Elec. Eng. Dept., Hackney Technical Institute, London, 1904-08. *Address:* Indian Institute of Science, Bangalore.

HAYDEN, SIR HENRY HUBERT, C.S.I., 1919; C.I.E., 1903; B.A., B.A.I., F.G.S., F.R.S., HON. D. Sc., Calcutta; Director, Geological Survey of India; *b.* 1869. *Educ.:* Hilton College, Natal; Trinity College, Dublin. Joined Geological Survey of India, 1895; attached to Tirah Exp. Force, 1897-98; Tibet Frontier Commission, 1903-04; services lent to Amir of Afghanistan, 1907-08. *Address:* Geological Survey of India, Calcutta.

HAYWARD, THE HON. MR. MAURICE HENRY WESTON, I.C.S., Ll. B. (Cantab.), Member, Executive Council, Bombay, since Jan. 1921; *b.* 2 June 1868; *s.* of the late R. B. Hayward, Esq., F.R.S., of the Park, Harrow, *m.* to Alice Christine, *d.* of the late Judge Barber, Q.C., of Ashover, Derbyshire. *Educ:* Harrow School and St. John's College, Cambridge. Assistant Collector, Bombay, 1889; Under-Secretary to Bombay Government, 1895; Judicial Assistant, Kathiawar, 1897; District Judge, Karachi, 1899; Legal Remembrancer and Secretary to Government, 1905; Additional Judicial Commissioner, Sind, 1907; Acting Judicial Commissioner, Sind, 1909, 1913 and 1916; Ag. Judge, High Court, Bombay, 1911, 1914 and 1915; Judge, High Court Bombay, 1918-1920. *Address:* Secretariat, Bombay.

HEADLAM, CAPT. EDWARD JAMES, C.M.G. (1919), D.S O. (1916), F.R G.S., M.R. Met. S. F.R.S.A., Royal Indian Marine; *b.* 1 May 1873; *m.* Nancy Benyon, widow of Arthur Hobson, Nigeria, *Educ.*: Durham School, H.M.S. Conway. Sub.-Lieut. R.I.M. 1894, Asstt. Marine Transport Officer, N. China. 1900-01, R. Humane Soc's. medal. Hon. Member, American Miy. Order of Dragon) Served gun-making operations, Persian Gulf (medal with clasp); served European war (Despatches four times). Principal Naval Transport Officer, South and East African Force, 1914-15; Star British and allied medals. Dy. Director, R.I.M. *Publication:* History of Sea Service under the Govt. in India. *Address:* Bombay.

HEALD, THE HON. MR. JUSTICH BENJAMIN HERBERT, M. A., V. D., I. C. S. Judge Chief Court of Lower Burma, 1921, *b.* 16th September 1874. *m.* Edith *d.* of Rev. J. Bonser, B. A. *Educ*: Nottingham High School, Queen's College, Oxford. University Exhibitioner in Chinese, 1897, M. A. Entered I. C. S., 1898, acted as Deputy Commissioner from 1905, District Judge, 1906, Divisional Judge 1911, on Special Tribunal 1917, Additional Judge, Judicial Commissioner's Court, Upper Burma, 1917, Judicial Commissioner, Upper Burma, 1920, Judge, Chief Court of Lower Burma, 1920, Chairman, Standing Committee on Imperial Idea from 1918, Major (acting C. O.) 34 I. D. F. 1919, V. D. 1919, *Address*: Rangoon.

HENDERSON, ROBERT HERRIOT, C.I.E., Tea Planter (retired), Supdt. of Tarrapur Company's Tea Gardens, Cachar, Assam; Chairman, Ind. Tea Assoc., Cachar and Sylhet. Represented tea-planting community on Imp. Leg. Council, 1901-2, when legislation regulating supply of indentured coolie labour was under consideration. Was Member,

Legislative Council of E. Bengal and Assam, President, Manipur State Durbar, 1917-19. *Address :* Bengal Club, Calcutta.

HENRY, WILLIAM DANIEL, C.I.E.; Manager, Alliance Bank of Simla, Ltd., Simla, and Colonel Commanding Simla Rifles, I.D.F., V.D.; A.D.C.; *b.* 1855. *Educ.:* Dr. J. Yeats' School, Peckham. *Address:* Kelvin Grove, Simla.

HEPPER, SIR (HARRY ALBERT) LAWLESS, Kt. (1918), Director, Bombay Govt. Development Dept. *b.* 30 January 1870. *m.* Kathleen Florence Keelan. *Educ.* : Rossall and R. M. A., Woolwich. Commissioned in Royal Engineers, 1890. Joined N. W. Railway, 1894, Served with Chitral Relief Expedition, 1895; Deputy Agent, G. I. P. Railway, 1906. Retd. from Army, 1912; Agent, G. I. P. Ry., 1911-1920. President, Indian Railway Conference Association, 1916-17; Controller of Munitions, Bombay, May 1917 to August 1918. *Address*: Mount Pleasant Road, Malabar Hill, Bombay.

HERTZ, HENRY FELIX, C.I.E., F.R.G.S.; Barrister; (retired) Imperial Police Service, Burma; Corresponding Member, K. D. G. S. *b.* 1863; *g. s.* of Bishop Hertz of Ribe, Denmark. *Educ.:* St. Xavier's College, Calcutta. Took active part in operations round Mandalay, 1886-87, and in Shan States, 1887-90; in operations 1890-1901, in Kachin Hill and Chinese Frontier. *Publication*: "All about Kachins" *Address*; "Granhoi", Kalaw, Southern Shan States, Burma.

HICKLEY, VICTOR NORTH, C.I.E., V.D., Lieut.-Col., Behar Light Horse; A. D. C. to Lt.-Govr., Behar and Orissa; Indigo planter in Behar. *Educ.:* Eton; Exeter College, Oxford. *Address:* Mozufferpore.

HICKMAN, LT.-COL. ROBERT ST. JOHN, V.D., Comdt., 2nd Surma Valley, L. H. (I.D.F.); Tea planter. *Address:* Dwarband, P.O. Assam.

HIDAYATALLAH, THE HON. KHAN BAHADUR SHAIKH GHULAM HUSSAIN, Minister, Govt. of Bombay; *b.* Jan. 1879. *Educ.:* Shikarpur High School, D. J. Sind Coll. and Govt. Law School, Bombay; Pleader; Member and elected Vice-Presdt., Hyderabad Municipality; Presdt., District Local Board, Hyderabad. and member, Bombay Leg. Council, for past 8 years. *Address:* The Secretariat, Bombay.

HIGNELL, SIDNEY ROBERT, C.S.I. (1922), C.I.E. *Educ.:* Malvern; Exeter College, Oxford. Entered I.C.S., 1896; Magte. and Collr., 1912. Dy. Secretary, Govt. of India, Home Deptt., 1915-19; Officiated as Home Secretary on four occasions during that period, Private Secretary to H. E. the Viceroy 1920. *Address :* Delhi or Simla.

HILL, MONTAGUE, C.I.E.; Chief Conservator, C. P., since 1913. Joined I. F. D., 1887; Conservator, Burma, 1906; Offg. Inspr.-Genl. of Forests, India, 1914. *Address*: Pachmarhi, C. P.

HOLBERTON, SIR EDGAR JOSEPH, Kt. (1921), C.B.E. (1919); Member, Council of State. *b.* 10 May 1874. *m.* Mary Renee (Kane). *Educ:* Sherborne School and Magdalene College, Cambridge. School-Master 1896-99; Bombay Burma Trading Corpn., Ltd., 1899-1921. Chariman, BurmaChanber of Commerce, 1919-21; Vice-Chairman Rangoon Port Forest, 1919 21; Consul for Siam at Rangoon, 1915-1921. *Address*: Kemendine Lodge, Rangoon or Wellington Club, 1. Grosvenor Crescent, London, S.W.

HOLE, ROBERT SELBY, C.I.E. (1919); Indian Forest Department. *b.* 15 January 1875. *Educ.:* Clifton College and Cooper's Hill. *m.* Beatrice Mary, *d.* of Surg.-General B. P. Rooke. Joined Forest Department, 1896. Forest Botanist, Forest Research Institute, Dehra Dun, since 1907. *Address:* Dehra Dun, U. P.

HOLLAND, ROBERT ERSKINE, C.S.I. (1921) V.D., I.C.S., Political Department, Government of India; *b.* 1873; *s.* of Sir Erskine Holland, K.C.; *m.* 1910. *Educ.*: Winchester Oriel Coll., Oxford. Entered I.C.S, 1895; Secretary, Board of Revenue, Madras, 1903; served Foreign Department of Govt. of India, 1904-08; Political Agent and Consul at Muscat, 1908-10; Political Agent, Eastern States, Rajputana, 1911-13; Depy. Secy., Govt. of India, 1914. On political duty with Mesopotamia Field Force, 1915 and 1917. Agent to Governor-General, Rajputana, 1919. *Address*: The Residency, Mount Abu.

HOOPER, REV. WILLIAM, D.D.; Missionary C.M.S.; Translator, Mussoorie, since 1892; *b.* 1837. *Educ.:* Cheltenham Preparatory School; Bath Grammar School; Wadham College, Oxford; Hebrew Exhibition; Sanskrit Scholarship; 1st class in Lit. Hum.; B.A., 1859; M.A., 1861; D.D. 1887. Went to India, C.M.S., 1861; Canon of Lucknow, 1903-1919; Vicar of Mount Albert, New Zealand, 1889-90. *Publications*:—The Hindustani Language, Notes on the Bible and many smaller works in English, Hindi and Urdu. *Address :* Mussoorie, India.

HORNELL, WILLIAM WOODWARD, C.I.E. (1917); Deputy Secretary, Government of Bengal (Ministry of Education) 1921; *b.* 18 September 1878. *Educ.:* Radley and Trinity College, Oxford. Appointed to Indian Education Service, 1902; Board of Education (London), 1908; Assist. Director of Special Inquiries and Reports, 1911, Secretary to the first Imperial Educ. Conference, 1911; D. P. I., Bengal, 1913; Member of Calcutta University Commission, 1917-19. Director of Public Instruction, Bengal, 1913-1921. *Address ;* Bengal Club, Calcutta.

HOWARD, ALBERT, C.I.E., M.A., A.R.C.S., F.L.S.; Imperial Economic Botanist to Govt. of India, since 1905; *b.* 1873; *Educ.:* Royal College of Science, London; St. John's College, Cambridge. First Class Hons. Nat. Science Tripos, 1898; B.A., 1899; M.A., 1902; Mycologist and Agricultural Lecturer, Impl. Dept. of Agriculture for West Indies, 1899-1902; Botanist to South-Eastern Agricultural College, Wye, 1903-1905. Numerous papers on botanical and agricultural subjects. *Address:* Pusa, Bihar.

HOWELLS, GEORGE, B.A. (Lond.); M.A. (Camb.); B. Litt. (Oxon); B.D. (St. Andrews); Ph.D. (Tubingen), Principal of Serampore

College, Bengal, since 1906; *b.* May 1871. *Educ.:* Gelligaer Grammar School; Regent's Park and University Colleges, London; Mansfield and Jesus Colleges, Oxford; Christ's College Cambridge; Univ. of Tubingen. Appointed by Baptist Missionary Society for Educational work in India, 1895, located at Cuttack, Orissa, engaged in High School and theological teaching, and general literary and Biblical translation work, 1895-1904; originated movement for reorganisation of Serampore College. Angus Lecturer, 1909; and Fellow of University of Calcutta, 1913. *Address:* Serampore College, Serampore, Bengal.

HUDDLESTON, CAPTAIN ERNEST WHITESIDE, C.I.E., C.B.E.; Royal Indian Marine. Port Officer, Madras. *b.* Aug. 1874. *Educ.:* Bedford School. Entered R.I.M., 1895; served Egyptian Camp, 1895-96; wrecked in Warren Hastings' troopship off Reunion 1897; received Roy. Humane Society's silver medal, and Lloyd's silver medal for saving life on this occasion; Lieut., 1900; served China Expedition (Boxer Rising), 1901-02, as Assist. Mar. Transport Officer; Mar. Transport Officer, Somaliland Expedition, and was in charge of landing operations in Obbiat, 1902-4; Staff Officer, Bombay Dockyard, 1911; Commander, 1913. Captain, 1917. Senior Marine Transport Officer, Bombay, 1914-19. *Address:* Madras.

HUDSON, GENERAL SIR HAVELOCK, K.C.I.E (1919), K.C.B. (1918), Commanding in Chief Eastern Command (1920). *b.* 26 June, 1862. *m.* Kate, daughter of late Major Hawkins. *Educ.:* Reading School. 2nd Battalion Northants Regiment, 1881-84; 19th Lancers (I. A.), 1885-1910. Served in N. W. F. Campaigns, 1889 and 1897; China, 1910; European War, 1914-17. Mentioned in despatches five times. Commanded 8th Division in France. Adjutant-General in India, 1917-20. *Address:* Naini Tal or Lucknow.

HULL, REV. ERNEST R., S. J., EDITOR of *The Examiner.* *b.* 9 September 1863. *Educ:* Society of Jesus, English Province. Came to India 1902 and since then engaged in literary work in Bombay. *Publications:* The Examiner and a series of Examiner Reprints, on theological, historical and controversial subjects. *Address: The Examiner* Press, Medows Street, Bombay.

HUMPHRYS, MAJOR FRANCIS HENRY, C.I.E. (1920). British Representative in Afghanistan. (*b*) April 24, 1879. *m.* Gertrude Mary Deane, *d.* of Sir Harold Deane, K.C.S.I. *Educ.:* Shrewsbury and Christ Church, Oxford. Joined 2nd Worcesters, 1900; South African War; Joined 25th Punjabis, 1902; Entered Political Dept., Govt. of India, 1903; Dy. Commr., Bannu and Kohat; Pol. Agent, Tochi; Malakand, Khyber; Joined Royal Flying Corps in Europe, March 1918. *Address;* Kabul.

HUNTER, MATTHEW, C.I E.; Principal, Rangoon College, since 1911. *Educ.:* Giggleswick School; Queen's College, Oxford; Strassburg and Heidelberg Universities; Honours Final School of Natural Science, Oxford; Burdett-Coutts University Scholarship in Geology; M.A., 1890. Lecturer in Chemistry and Physics, Rangoon College, 1890-1909; Chemical Examiner to Govt. of Burma, 1890-1905; Acting Principal, Rangoon College, 1905 and 1909-11. *Address:* Rangoon College, Rangoon.

HUSSAIN, MOULVI AHMED, C.S.I., Nawab Ameen Jung Bahadur, Assistant Minister to H. H. Nizam, since 1914, and Ch. Sec. to Nizam's Govt., since 1896. *Educ.:* Christian College, Presidency College, Madras Univ. M.A., 1890; Dy. Coll. and M., Madras Presidency, 1890-92; Asst Priv. Sec. to H. H. Nizam, 1893; F.S.A., 1912; F.R.A.S., 1914.

HYDARI, A., B.A., Finance Minister, Hyderabad; *b.* 8 Nov. 1869. *Educ.:* at St. Xavier's College, Bombay. Joined Indian Finance Deptt., 1887; Asstt. Acctt. General, U. P., 1890; Dy. Acctt. General, Madras, 1900; Examiner, Govt. Press Accounts, 1901; Apptd. Acctt. General, Hyderabad State 1905; Financial Secretary, 1907; Secretary to Govt., Home Deptt., 1911; First President, Hyderabad Educational Conference in 1915. *Address.* Hyderabad, Deccan.

HYDERABAD, HIS EXALTED HIGHNESS ASAF JAH MUZAFFAR-UL-MAMALIK NIZAM-UL-MULK NIZAM-UD-DAULA NAWAB MIR (SIR OSMAN ALI KHAN BAHADUR FATEH JANG) OF, G. C. S. I., (1911), SON OF THE LATE LIEUT.-GENL. MIR SIR MAHBOOB ALI KHAN BAHADUR, G. C. B., G. C. S. I., NIZAM OF HYDERABAD; *b.* 1886; *ed.* privately; Hon. Col. in the Army, and of 20th Deccan Horse. *Address:* Hyderabad, Deccan.

IDAR, MAHARAJA OF, since July 1911, MAHARAJA DHIRAJ MAHARAJA SHRI DOLAT SINGHJI; *m.* Maharaniji Shri Poonglianji. *Heir:* *s.* Maharaja Kumar Himmatsinghji. *Address:* Himmatnagar (Mahikantha Agency).

IMAM, SYED HASAN, Barrister. *b.* 31 August 1871. *Educ.:* Patna and in England. Called to the Bar (Middle Temple), 1892. Practised at Patna and Calcutta until 1911. Judge of the High Court, Calcutta, 1912-16. Resumed practice at Patna; President, Special Session, Indian National Congress, September, 1918, President, All-India Home Rule League; Delegate to London Conference on Turkish Peace Treaty, 1921. *Address:* Hasan Munzil, Patna.

IMPEY, LT.-COL. LAWRENCE, C.S.I., C.I.E.; Resident at Baroda; *b.* 1862. *Educ.:* Marlborough; Sandhurst, Indian Army, 1885; employed under Govt. of India in the Pol. Dept., 1887; has held appointments of Pol. Agent in Alwar, Bhopal, Eastern States, Rajputana, Bundelkhand, etc. *Address:* Baroda.

INDORE, MAHARAJA OF, H. H. MAHRAJAH-DHIRAJA TUKOJI RAO HOLKAR, BAHADUR; *b.* 1891. *Educ.:* Mayo Chiefs Coll., Ajmere; Imp. Cadet Corps. *Address:* Indore.

IRWIN, HENRY, C.I.E., M.I.C.E.; *b.* 1841; joined P.W. Dept., 1868; Consulting Architect to Govt., 1889; retired, 1896. *Address:* Adyar House, Adyar.

ISACKE, COL. (TEMP. COL. COMDT.) HUBERT, C. S.I. (1919); C.M.G. (1915); Commanding 17th

Indian Inf. Brigade; *b.* 28 October 1872. *m.* Ada Mildred, daughter of the late Sir Charles Layard. *Educ.:* King's School, Canterbury; R. M. C. Sandhurst. R. West Kent Regiment, 1892. Served in France, 1915-16. *Address:* Flagstaff House, Dehra Dun, U. P.

ISRAR, HASAN KHAN, KHAN BAHADUR, SIR, C.I.E.; Jud. Minister, Bhopal; *b.* Shahjahanpur. *Educ.:* Shahjahanpur, Bareilly. *Address:* Judicial Minister, Bhopal.

IYENGAR, S. SRINIVASA, Advocate-General, Madras. *b.* 11 September 1874. *Educ.:* Madura and Presidency College, Madras. Vakil (1898). Member of Madras Senate, 1912-16; President, Vakils' Association of Madras; President, Madras Social Reform Association; Member of All-India Congress Com. *Publication:* a book on law reform (1909). *Address:* Mylapore, Madras.

IZZAT NISHAN, KHUDA BAKHASH KHAN TIWANA. Nawab, Malik; Dist Judge, Dera Ghazi Khan; *b.* 1866. *Educ.:* Government High School, Shahpore; private training through Col. Corbyn, Deputy-Commissioner Appointed an Hon. Magistrate, 1881; Extra Asst. Commsr., 1894; British Agent in Cabul, 1903-06. *Address:* Khawajabad, district Shahpore, Punjab.

JACKSON, JOHN ERNEST, C.I.E.; A.C.A., Chief Auditor, B. B. & C. I. Railway, Bombay. *b.* 26 November 1870; *Educ.:* Marlborough College. *Address:* Malabar Hill, Bombay.

JACOB, ARTHUR LESLIE, C.I.E.; Major I. A.; Pol. Ag., Zhob, since 1912; in military employment, 1891-98; Pol. Asst., Zhob, 1898; Asst. to Gov.-General's Agent, Baluchistan, 1901; Pol. Ag., Baluchistan, 1909. *Address:* Zhob, Baluchistan.

JACOB, GENERAL SIR CLAUD WILLIAM, K.C.B., *cr.* 1917; K.C.M.G. *cr.* 1919; C.B. 1915; Indian Army; Chief of the General Staff since Jan. 1920. A.D.C., General to H. M. the King. *b.* 21 Nov. 1863; *m.* 1894, Clara Pauline, *d.* of Rev. J. L. Wyatt, Rector of Brandon, Suffolk. *Educ.:* Sherborne School; R.M.C. Sandhurst. Entered army, 1882; General Staff Officer, 1st Grade, India, 1912; Brig. Gen. Commanding Dehra Dun Brigade, 1915; Commanding Meerut Division, 6 Sept. 1915; 21st Division, 18th Nov. 1915; 2nd Army Corps, 28th May 1916; served Zhob Valley, 1890; N. W. Frontier, India, 1901-2 (medal with clasp); European War, 1914-18 (C. B. wounded, prom. Major-General, Lieut. Gen., 3 June 1917, Order of St. Vladimir 4th class with swords (Russia), despatches ten times, Grand Officer de l'ordre de la Couronne (Belgium) with Croix de Guerre, Grand Officer de Legion d'Honneur, France, Grand Officer de l'ordre de Leopold, Distinguished Service Medal, American. *Address:* Army Headquarters, India.

JAFFER, HON. KHAN BAHADUR EBRAHIM HAROON, Member of the Council of State; *b.* Dec. 27, 1881. *Educ.* Deccan College, Poona; Landlord and proprietor of Messrs. Jaffer Jussuff & Co., President, Anjuman-i-Islam, Poona; Hon. Secy., Islamia School; Managing Trustee of Jame-Musjid and trustee and member of other institutions and funds. Organised Bombay Presidency Muslim League, 1908; and revived Bombay Presidency Mahomedan Educational Conference; President, All-India Muslim Confce., Lucknow, 1919, at which All-India Central Khilafat Committee established; Member, Cantonment Reforms Committee; Member, Bombay Legislative Council, 1916-19; represented Bombay Presidency Mahomedans on the Imperial Legislative Council, 1919-20. *Address:* East Street, Poona.

JAGAT'NARAYAN, PANDIT, Minister, U. P. Govt. for Local Self Govt. and Public Health. *b.* Dec. 1864. *Educ.:* Canning Coll., Lucknow. *m.* Srimati Kamlapati, *d.* of P. Sham Narayan Saheb Raina. *Address:* Golagan, Lucknow.

JAIPUR, MAHARAJA OF, LIEUT.-GEN. H. H. SARAMAD-I-RAJHAI-HINDUSTAN RAJ RAJENDRA SHREF MAHARAJADHIRAJ, SIR SAWAI MADHO SINGH BAHADUR, K.C.C.S.I., G.C.I.E., G.C.V.O., G.B.E., Donat of the Order of the Hospital of St. John of Jerusalem, LL.D., Edin. Hon. Major-General; Hon. Col. of 13th Rajputs (Shekhawat) Regiment; Member of First Class of Order of Crown of Prussia, 1910; *b.* 1861; *s.* 1880. Heir-apparent, Maharaj Kumar Man Singh. *Address:* Jaipur.

JAMES, LT.-COL. CHARLES HENRY, C.I.E., I.M.S.; Civil Surgeon, Delhi. *b.* 1863. *Educ.:* Cranleigh; St. Thomas' Hospital, London; M.R.C.S. and L.R.C.P.; Asst. House Surgeon; House Surgeon and Resident Accoucheur, St. Thomas' Hospital, 1888-89; House Physician, Gen. Lying-in Hospital, 1889-90; entered I. M. S., 1891; Dy. Sanitary Commsr., Punjab, 1894-1900; Medical Adviser, Patiala State, 1903-12; F.R.C.S., England, 1908; Major, 1903; Lieut.-Colonel, 1911; Civil Surgeon, Simla, 1912-16. *Publications:* Manual for Vaccinators in the Punjab, 1895; Report on Plague in Bombay, 1897; Report on Outbreak of Plague in Punjab, 1897; articles on Medical and Surgical subjects in medical journals. *Address:* Delhi.

JAMIAT RAI, DIWAN, RAI BAHADUR, C.I.E. *b.* 1861. *m.* 1891. *Educ.* Bhown, Kohat and Gujrat. Ent. Govt. Service, 1880; served in Political Office with Kuram F.F., 1880; accompanied Afghan Boundary Commission, 1885-86; special duty, boundary settlement of Laghari Barkhan, 1897; Asst. to the Supdt. of Gazetteers of Baluchistan, 1902-07; services acknowledged by Govt. of India; on special duty in connection with revision of Establishments, 1910; Asst. to Supdt. of Census Operations, Baluchistan, 1910-11; Ex Asst. Commsr., 1902; Settlement Officer, Baluchistan, 1912. Provincial Superintendent of Census for Baluchistan 1920. *Publications:* Quetta Municipal Manual, History of Freemasonry in Quetta, Reports on the Settlement of Duki and Barkhan. *Address:* Quetta.

JANJIRA, H. H. NAWAB SIR SIDI AHMAD KHAN SIDI IBRAHIM KHAN, G.C.I.E.; *b.* 1862; *s.* 1879; descendant of Sarul Khan family. *Heir: s.* Sidi Mahamad Khan, *b.* 7 Mar. 1914. *Address:* Murud, Janjira, Kolaba.

JAORA STATE, MAJOR H. H. FAKHAR-UD DAULA NAWAB SIR MUHAMMED IFTIKHAR AL-KHAN BAHADUR SAULAT JANG, K.C.I.E. *b.* 1883. H. H. served in European War. *Address:* Jaora State, Central India.

JARDINE, WILLIAM ELLIS, C.I.E., F.R.G.S., M.R.A.S.; *b.* 1867. *Educ.:* Fettes College, Edinburgh; Wren's; Trinity College, Cambridge. Ent. I.C.S., 1886; joined Pol. Dept. of Govt. of India, 1893; became 2nd Asst. Resident, Hyderabad 1st Asst.; Ag. to Govr.-Gen. in Cent. Ind. and 1st Asst. Resident, Hyderabad; Pol. Ag., Bundelkhand, 1904-09; Malwa, 1910-11; Resident, Gwalior, 1912-13; Baroda, 1914; Gwalior, since 1914; Knight of Grace of Order of St. John of Jerusalem. *Address:* Gwallor.

JEHANGIR, SIR COWASJEE, 1st Baronet; nephew and adopted son of late Sir Cowasjee Jehangir Readymoney, C.S.I. *b.* 8th June 1853. *Educ.:* Proprietary School, Elphinstone College and University of Bombay; merchant, millowner and landed proprietor; Delegate of the Parsee Matrimonial Court; has assumed the name of Cowasjee Jehangir, Kt., 1895; *m.* 1876, Dhunbai, *d.* of the late Ardeshir Hormusjee Wadia, and has issue. *Address:* Readymoney House, Malabar Hill, Bombay.

JEHANGIR, COWASJI (Junior), M.A. (Cambridge), C.I.E. (1920); O.B.E. (1918); Partner in the firm of Cowasji Jehangir & Co. *b.* Feb. 1879; *m.* to Hirabai, *d.* of H. A. Hormasji of Lowjee Castle. Educated at St. Xavier's College, Bombay, and St. John's College, Cambridge. Member of the Bombay Corporation since 1894; Chairman of its Standing Committee, 1914-1915; Member of the Bombay Improvement Trust; President, Bombay Municipal Corporation, 1919-1920. Temporary Member of the Executive Counci, Bombay (Dec. 1921). *Address:* Nepean Sea Road, Malabar Hill, Bombay.

JEJEEBHOY, SIR JAMSETJEE, 5th Baronet; Vice-President, Legislative Itssembly; *b.* 6th March 1878; *s.* father Sir Jamsetjee, 1908, and assumed the name of Jamsetjee Jejeebhoy in lieu of Rustomjee; Head of the Zoroastrian Community in Bombay; Pres. of the Sir Jamsetjee Charity Funds, and Member of Municipal Corporation. *m.* 1906, Serenebai Jalbhoy Ardesar Sett. *Address:* Mazagon Castle, Bombay.

JENNINGS, MAJOR-GENERAL WILLIAM ERNEST, Kt. of Grace, Order of St. John of Jerusalem (1914); M.D.; C.M.; D.P.H., K. H. P.; M.L.C.; Surgeon Gen. with the Govt. of Bombay. *b.* 1 January 1865. *M.* Margaret Catherine Steele. *Educ.:* Edinburgh University. Joined I.M.S., 1887. *Publications:* Manual of Plague. Transactions of Bombay Medical Congress. War Relief Work in the Bombay Presidency. Prevention of Tuberculosis, etc. *Address:* 5, Queen's Gardens, Poona.

JESSE, WILLIAM, M.A.; Principal, Meerut Coll., since 1903; *b.* 7 Sep. 1870. *Educ.:* Hereford Cath. Sch.; Selwyn Coll., Cambridge. Asst. Master, Bedford Mod. Sch., 1891-94; La Martiniere Coll., Lucknow, 1894-1903; Fellow and Syndic., Allahabad Univ.; Fellow, Zoological Soc. and Mem., Brit. Ornithological Union. *Publications:* Various pamphlets and papers on Indian Ornithology and on Indian education. *Address:* The College, Meerut.

JEVONS, HERBERT STANLEY, M.A., B.Sc. (Lond.), F.G.S., F.S.S.; Univ. Prof. of Economics in Univ. of Allahabad since 1914; editor of Indian Journal of Economics; Member Imp. Trust, Allahabad; and Hon. Treas., Indian Economic Association; *b.* 8 October 1875. *Educ.:* Giggleswick Gram. Sch.; University Coll., London; Trin. Coll, Cambridge; Geol. Inst., Heidelberg; Univ. Demonstrator in Petrology, Cambridge, 1900-01; Lecturer in Mineralogy and Geology, and Asst. to Prof. T. W. Edgeworth David, F. R. S., in University of Sydney N. S. W., 1902-04; Lectr. and later Fulton Prof. of Econ. and Pol. Science in Univ. Coll of S. Wales and Monmouthshire, Cardiff, 1905-11; engaged in garden city and housing reform propaganda, 1911-14. Has undertaken researches in rural economics, irrigation on periodicity in Economic Phenomena and other Indian Currency and finance, 1915-1921. *Publications:* Essays on Economics; The Sun's Heat and Trade Activity; The British Coal Trade; Consolidation of Agricultural Holdings in the U P; Economics of Tenancy Law and Estate Management; Exchange; Banking and Prices in India; and numerous books, papers and articles on Petrology, Mineralogy, Economics, Politics Housing, Reform, etc. *Address:* The University, Allahabad.

JEYPORE, Raja of, Lieutenant Sri Sri Sri Raja Ramchandra Deo Raja of Jeypore Samas thanam, *s.* of late Maharaja Sir Sri Vikrama Deo Bahadur, K.C.I.E., and late Sri Sri Sr Lady Seethapatta Maharani Circar. *b* 31st December 1893; *Educ.:* privately unde Dr. J. Marsh, M.A., LL.D., Newton, Esq., M.A., E. Winckler, Esq., B. A. *m.* 1913 Sri Sri Sri Lakshmi Patta Maharani Circar, *d.* of the late Maharajah Sir Sri Bhagavat Prasad Singh Bahadur, K.C.I.E., of Balram pur, United Provinces of Agra and Oud. First Landed Zamindar in the Madras Presidency, owning about 14,000 square miles *Address:* Fort, Jeypore, Vizagapatam Agency, Madras Presidency, India.

JHALAWAR, H. H. MAHARAJ RANA SIR BHAWANI SINGH BAHADUR OF; K.C.S.I.; *b.* 1874; *s.* 1899. *Educ.:* Mayo Coll., Ajmere. Has greatly extended education throughout the state and established several libraries. He has recently conferred the right of legislation on the people by the creation of two Houses a lower and an upper one on the lines adopted in British India. *Publication;* Travel Pictures. *Address:* Jhalrapatan, Rajputana.

JIND, H. H. FARZAND-I-DILBAND RASIKH-UL-ITIKAD DAULAT-I-INGLISHIA, RAJA-I-RAJGAN MAHARAJA SIR RANBIR SINGH RAJENDRA. LT.-COLONEL, G.C.I.E., K.C.S.I.; *b.* 1879; *s.* 1887. *Address:* Sangrur, Jind State, Punjab.

JODHPUR, REGENT OF, LIEUT.-GENL. HIS HIGHNESS SIR PERTAB SINGHJI, G.C.B., G.C.V.O., G.C.S.I., K.B.C., LL.D., Hon. A.D.C. to H.M. the King-Emperor; *b.* 1845; *m.* Maharani Bhatianiji (*d.* 1907); Hon. Commandant of Imperial Cadet Corps; received administrative training under H. H. Maharaja Ram Singh of Jaipur; was invited to Jodhpur by his elder brother Maharaja Sir

Jaswantsingh and placed at head of Jodhpur administration; he was one of the Kabul Mission of 1879, an extra A.D.C. to General Ellis in the Mohmand Expedition in 1897, and to General Sir William Lockhart in Tirah Campaign in 1898 (wounded and despatched) in 1900 he went with British Force to China in command of Jodhpur Imperial Service Troops and saw active service; was made Ruling Chief of Idar State in Guzerat in 1902, which he abdicated in favour of his son; made Lt.-Col. and subsequently Major-General in British Army; European War, 1914-15 (despatches), received the G.C.B. in 1918 and the Legion D'Honneur from the French Republique on the 8th March, 1918; order of the Nile from the Sultan of Egypt. On death of Maharaja Sri Sumer Singhji of Jodhpur again appointed Regent. *Address :* Jodhpur, Rajputana.

JOGLEKAR, RAO BAHADUR RAMCHANDRA NARAYAN, I.S.O., B.A., Chief Land Officer, Tata Co., Coll. Baroda State, from Decr. 1916 to June 30, 1920. Depy. Coll. First grade and Native Asst. to Commsr., C.D., 1901-16 some time Adv. to Chief of Ichalkaranji, *b.* Satara, 8th Dec. 1858. *Educ.:* Deccan Coll. Poona. Held non-gazetted appointments in Nasik, Satara, Ahmednagar, Poona and Sholapur Dists., 1883-1899; Depy. Coll., 1899. *Publications:* Land Revenue Code annotated up to 1st Octr. 1920; Watan Act annotated up to 1st Sept. 1920; Alienation Manual; Inspection of Revenue offices; Court fees in Revenue and Magisterial offices. *Address :* 203, Kala Haud, Shukrawar Peth, Poona City.

JOHN, SIR EDWIN, KT. (1922); Kt. of the Order of St. Gregory the Great (Civil Order) 1901, Kt of St. Sylvester (1920), C.B.E (1919). Cotton and seed merchant and mill-owner, *b* 3 August 1856. *Educ :* Stonyhurst. *m.* Mary Sykes. *Address:* 49, Cantonments, Agra, U.P.

JOHNSTON, FREDERICK WILLIAM, C.S.I., C.I.E., I.C.S.; in Pol. Dept. of Govt. of India; Resident, Second class and Revenue and Judicial Commissioner in Baluchistan; *b.* 2nd Nov. 1872. *Educ.:* Kelvinside Acad., Glasgow; Trinity Hall, Cambridge (B. A., 1894). Asst. Commsr., 1896; went to N. W. Fron., 1899: and was employed there till end of 1911, Govt. of India, Finance Dept., 1911-15; Ministry of Munitions, England, 1915-17. *Address :* Quetta.

JOSHI, REV. CANON, D. L., Canon of St. Thomas' Cathedral, Bombay; Hon. Chap. to Bishop of Bombay; Translator of Marathi O.T. and commentaries. In charge of Converts' Home and C.M.S. Evangelistic work, Bombay. Chairman, Bombay and Railway District Church Councils. *b.* 8 May 1864. *Educ.:* Robert Money Sch., Bombay; Coll. of Science, Poona; Div-School, Poona. Joined C.M.S., 1882; ordained, 1893; many years Pastor, C.M.S. Marathi Church in Bombay. *Address :* Molesworth, Girgaum, Bombay.

JOSHI, NARAYAN MALHAR; Member of the Servants of India Soc. *b.* June 1879. *Educ:* Poona New English School and Deccan Coll, Taught in private schools and Govt. High Schools for si :years, Joined Servants of India Soc., 1909. Sec., Bombay Social Service League, since 1910, and Sec., Bombay Presy. Social Reform Assoc., since 1917. Sec., W. India Nat. Liberal Assoc. since 1919. Was sent to Mesopotamia by Govt. of India as representative of the Indian Press, 1917, and in 1920 to Washington as delegate of the working classes in India to International Labour Confce. Kaisar-i-Hind Silver medal (1919). Member of the Bombay Municipal Corpn since 1919. Was awarded but declined C.I.E in 1921. Nominated by Govt. a member of the Legislative Assembly in 1921 to represent labour interests. *Address :* Servants of India Society, Bombay.

JUGMOHANDAS VARJIVANDAS, SIR, KT., Merchant and Landlord; *b.* 1869. *Educ.:* Fort High Sch., Bombay. Mem., Bombay Corpn., 1900-06; trustee of several charitable institutions. *Address:* Bombay.

JUKES, JOHN EDWIN CLAPHAM, C.I.E. (1921). Joint Sec., Finance Dept., Govt. of India since 1920. *b.* 12 Nov. 1878. *Educ.:* Aldenham Sch., Pembroke Coll., Cambridge Porson Univ. prizeman, 1899. Chancellor's Classical Medallist, 1902. *m.* Marguerite Jessie, *d.* of the late James Searle of Reigate. *Address* : Richmond, Simla.

KAJIJI, MR. JUSTICE ABDEALI MAHOMEDALI, B.A., LL.B. (Cantab.), Bar-at-Law; Judge, High Court, Bombay. *b.* 12 February, 1871. *Educ.:* St. Mary's Institution, Byculla; St. Xavier's Coll., Bombay, Downing Coll., Cambridge, and Lincoln's Inn. Ord. Fellow, Syndic and Dean in Law of Bombay Univ. President, Anjuman-i-Islam, Bombay; Vice-President, Islam Club and Islam Gymkhana. *Address :* Dilkhoosh, Grant Road, Bombay.

KALE, THE HON. MR. VAMAN GOVIND. Member of the Council of State. *b.* 1876. *Educ.:* New English School and Fergusson Coll., Poona. Joined the Deccan Education Soc., Poona, as a life member in 1907. Fellow of Bombay Univ. since 1919. Prof. of History and Economics, Fergusson Coll. Has published many articles on economics and social reform, and the following: "Indian industrial and economic problems." "Indian administration." "Gokhale and economic reforms." "India's war finance." "Currency reform in India." "Constitutional reforms in India." *Address*: Fergusson Coll., Poona.

KAMAT, BALKRISHNA SITARAM, M.L.A. (1921). Merchant and Contractor. *b.* 21 March, 1871. *Educ.:* Deccan Coll. *m.* Miss Yamunabai R. M. Gawaskar of Cochin. Member, Bombay Legis. Council, 1913-16, 1916-20. Member of various educational bodies. Has taken part in work for social and agricultural reform. *Address :* Ganeshkhind Road, Poona, or Tambe building, Dadar, Bombay.

KANDATHIL, RIGHT REV. MAR AUGUSTINE, D.D. Titular Bishop of Arad, and Vicar Apostolic of Ernakulam. Was Coadjutor with right of succession to the first Vicar Apostolic of Ernakulam, since 1911; *b.* Chemp, Vaikam, Travancore, 25 Aug. 1874. *Educ.:* Papal Seminary, Kandy, Ceylon. Priest, 1901; Parish Priest for some time; Rector of Prep

Sem., Ernakulam, and Private Sec. to the first Vicar Apostolic of Ernakulam, to end of 1911. *s.* Rt. Rev. Dr. A. Pareparambil as Second Vicar-Apostolic, 9 Decr. 1919; Installed on 18 Decr. 1919. *Address :* Bishop's House, Ernakulam, Malabar.

KANIKA, THE RAJA OF, HON. RAJA RAJENDRA NARAYAN BHANJA DEO BAHADUR, O.B.E. OF KANIKA; M.L.C. *b.* 24 March 1881. *m. d.* of Feudatory Chief of Nayagarh, 1899. *Educ.:* Ravenshaw Coll. Sch.; Coll., Cuttack. Received management of Killah Kanika from Court of Wards, 1902: Mem. of the Bengal Leg. Council, 1909-12; Mem. of Bihar and Orissa Leg. Council, 1912-16; Member, Imperial Leg. Council, 1916-20. Pres., Orissa Land-holders' Assn.; Vice-Pres., Bengal Landholders' Association; Vice-President, Bihar Landholders' Association; Mem. of Bengal Fishery Board; Vice-Pres., Bihar Landholders' Association; Mem., Roy. Asiatic Soc.; Member Governing Body, Revenshaw College, Cuttack. *Address :* Cuttack or Rajkanika, Orissa.

KANTARAJ URS, SIR M., K.C.I.E., C.S.I., Dewan of Mysore, 10 Dec. 1918. *b.* 20 Sept. 1870. *Educ.:* Maharaja's Coll., Mysore; The Christian Coll., Madras; Asst. Commsr., 1894; Asst. Priv. Sec. to H. H. Maharani Regent, 1895-99; Special Asst. Commsr., Bangalore, 1899; Depy. Commsr., Mysore Dist., also Pres., Mysore City Mun. Council, 1902; Chairman, Mysore City Imp. Trust Board, 1908; Exc. Commsr. in Mysore, 1912; Chairman, Industries and Commerce Committee, 1912-16; Mem. of Exec. Council, Mysore, 1913-18; created Rajaseva Dhurina (Gandabherunda Order), Oct. 1916. *Address :* Beaulieu, Avenue Road, Bangalore.

KAPURTHALA, H. H. JAGATJIT SINGH BAHADUR, MAHARAJA RAJA-I-RAJGAN OF, G.C.S.I., G.C.I.E.; *b.* Sept. 1872; *s.* father, 1877. *Address :* Kapurthala, Punjab.

KARAULI, H. H. MAHARAJA DHIRAJ SIR BHANWAR PAL, DEO BAHADUR, YADUKUL CHANDRA BHAL, G.C.I.E., K.C.I.E. *b.* 24 July 1864. *Educ.:* Mayo Coll., Ajmere. *s.* 1886. *Address :* Karauli, Rajputana.

KAYE, LT.-COL. C., C.S.I., C.I.E., C.B.E., I. A., Dr. of Intelligence Bureau, 1919. *b.* 27 May 1868; *m.* 5 September 1905, Margaret Sarah, *d.* of Rev. Thomas Bryson, London Mission, Tientsin, N. China: one *s.* 2 *d's. Educ.:* Winchester, Joined 2nd Bn. Derbyshire Regt., 1889; transferred to I.A., 1892; served N. W. F. of India, 1897-98; Gen. Staff Offlr. at I.A. Hd.-quatrters, Simla, 1908; Dy. Chief, Censor India, 1914-19. *Address ;* Simla.

KAYE, GEORGE RUSBY, F.R.A.S, Kaiser-i-Hind. 1st Class (1921); Curator, Bureau of Education, Govt. of India, *b.* 1866 *m.* Nina Gillespie Fox. *Educ.:* The Wyggeston Grammar School, Leicester; St. Mark's College, Chelsea and the University of Halle. Vice-Principal, Govt. Training College, Allahabad; Professor, Muir Central College, Allahabad. *Publications: Indian Mathematics: The Astronomical Observatories of Jai Singh* (Imperial Archæological Series); *Hindu Astronomy* (Archæological Memoirs); Various papers on the History of Mathematics and Astronomy in the *Bibliotheca Mathematica* (Leipzig), *Scientia* (Milan), *Journal of the Royal Asiatic Society*, &c. *Address :* Craig Dhu, Simla.

KEANE, MICHAEL, C.I.E. (1921); Presdt. U. P. Legislative Council. *b.* 1874. *m.* Joyce Lovett Thomas. *Educ:* Jesuit School, Clongomes Wood, and Univ. Coll, Dublin. Entered I.C.S, 1898. Has been Under-Sec. to Govt., on deputation under the Govt. of India for settlement work in the Tonk and Sirohi States in Rajputana; District Officer in Agra and Cawnpore, Judicial Sec. to Govt., and Ch.-Sec. to Govt. *Address:* Lucknow.

KEATINGE, GERALD FRANCIS, C.I.E., Dir. of Agriculture, Bombay Pres. *b.* March 1872. *m.* Marion, *d.* of J. S. Cotton. *Educ.:* Sherborne Sch., Balliol Col., Oxford. Ent. I.C.S. 1894; Dir. of Agriculture, 1907. *Publication:* Rural Economy in a Deccan Village. *Address :* Poona.

KEELING, HUGH TROWBRIDGE, C.S.I., A.M.I.C.E., Ch. Eng. and Sec. to Ch. Commsr., Delhi, since 1912; Mem. of Delhi Imp. Commn., 1913. *b.* 14 April 1865. *Educ.:* Marlbrough and Cooper's Hill, *m.* Edith *d.* of Col. T. O. Underwood, late 4th Punjab Cavalry. Asst. Eng., Madras P. W. D., 1887; Exec. Eng., 1898. *Address :* P. W. D., Delhi.

KEEN, LIEUT.-COLONEL WILLIAM JOHN, C.B.E., (1920), C.I.E. (1916), Pol. Dept., Government of India. *Educ.:* Haileybury College, R. M. C., Sandhurst. Gaz. to R. Welsh Fus. 1892; Trans. to I. A. 37th Dogras, 1894; served Chitral Re. Exp, 1895; Joined Punjab Commn. 1898; Pol. Dept., Govt. of India, 1901; serving in N. W. Fron. Prov.; served Kabul Khel Exp., 1902; Mohmand Exp., 1908; Great War, 1914-18; Afghan War, 1919. *Address :* Political Agent, Khyber, Peshawar, N.W.F.P.

KEITH, WILLIAM JOHN, C.I.E., M.A.; Rev. Sec., Burma, since 1912; Mem. of Com. of Lt.-Gov. *b.* 1873; *Educ.:* Edinburgh H. Sch. and Univ.; Christ Church, Oxford, Ent. I.C.S., 1895; (first in final Exam. 1906). Sec. to Fin. Commsr., 1899-1905; Sett. Offi. 1907-10; Sec. to Govt. of Burma, 1911-12. *Address :* Brachead, Rangoon; Canmaresk, Maymyo.

KEMP, NORMAN WRIGHT, Bar-at-Law (Inner Temple); Addl. Jud. Comsr., Sind, *b.* 29 October 1874 *Educ.:* the Collegiate, Edinburgh and Inner Temple. Chief Presidency Magistrate, Bombay, Chief Judge of Small Causes Court, Bombay; Acting Judge, High Court, Bombay. *Address ;* Sind Club, Karachi.

KENYON, MAJOR-GENERAL LIONEL RICHARD, C.B., 1917; R.G.A., Director-General of Ordanance since 1919; *s.* of J. R. Kenyon, K.C., B.C.I. of Pradoe Shropshire; *b.* 26 July 1867; *m.* 1896, Elizabeth Jane, *d.* of P.C. Sutherland, M.D., F.R.G.S., etc. Surveyor-General of Natal. *Educ.:* Winchester; R.M.A., Woolwich. 2nd Lt. R.A. 1887; Military Assistant to Chief Supdt. Ordnance

Factories, 1905-7; Secretary, Ordnance Board, 1907-10: Deputy Director, Ordnance Factories, India, 1911-16; Director of Munitions Inspection in U.S.A., 1916-19. *Address:* Army Headquarters, India.

KERR, JOHN HENRY, C.S.I., C.I.E., I. C. S.; Member, Executive Council, Bengal, since 1921. *b.* 1871. *Educ.:* Glasgow Academy and Univ.; Clare Coll, Cambridge. Joined I.C.S., 1892; Settlement Officer, Bihar, 1899; Coll. of Midnapore, 1904; Dir. of Land Rec, Bengal, 1905; Depy. Sec. to Govt. of India, Rev. Sec. to Govt. of Bengal, 1911. Chief Secretary to Govt. of Bengal, 1915. *Publications:* Settlement reports of Saran and Darbhanga; joint-editor of Rampini's Bengal Tenancy Act. *Address:* Government of Bengal, Calcutta.

KETTLEWELL, ARTHUR BRADLEY, C.I.E., I.C.S.; late Add. Sec. to Govt., Punjab. *Educ.:* Cheltenham; New Coll., Oxford. Ent. I.C.S., 1890; Pol. Offi., Wano, 1898-99. Depy. Commsr., 1903; Sec. to Govt., Punjab, 1903-07. *Address:* Lahore.

KHAPARDE, GANESH SHRIKRISHNA, B. A., (1877), LL.B. (1884). Advocate. *b.* 1855. *m.* to Laxmi Bai. *Educ.:* in Berar and Bombay. Extra Asstt. Commissioner in Berar from 1885 to 1889; returned to the Bar, Vice-Chairman of the Local Municipality and Chairman of the Dist. Board for nearly 17 years. Member of Viceroy's Legislative Council. Member of the Council of State. *Address:* Amraoti, Berar, C. P.

KINCAID, CHARLES AUGUSTUS, C.V.O., Ag. Judge, Bombay High Court, (1921) *b.* 8 Feb. 1870. *Educ.:* Sherborne Sch., Balliol Coll., Oxford. Passed I.C.S. examination, 1889; came out to India, 1891; Pol. Sec., 1910; Agent for Sardars in Deccan, 1914; Dist. and Sess. Judge, Satara, 1913-18; Addl. Judl Commsr., Sind, 1918; Judicial Commissioner of Sind, 1920; *Publications:* Outlaws of Kathiawar, and The Tale of a Tulsi Plant (Essays on Indian Subjects); Deccan Nursery Tales, 1914; The Indian Heroes, 1915; Ishtur Phakde, 1917. Tales from the Indian Epics, 1918; A History of the Maratha People, Vol. 1. 1918 Tales of the Saints of Pandharpur, 1919; Shri Krishna of Dwarka, 1920; Hindu Gods, 1920. Tales of King Vikrama. *Address:* Bombay.

KING, CHARLES MONTAGUE, C.S.I. (1922): C.I.E.; Depy. Commsr,. Punjab, since 1901. *Educ.:* St. Paul's School; Balliol Coll., Oxford Ent. I.C.S., 1890, Depy. Commsr., 1901. Commissioner, 1917. *Address:* Lahore.

KISHENGARH H. H. MAHARAJA ADHIRAJ MAHARAJA MADANSINGH BAHADUR, K.C.S.I., K.C.I.E.; *b.* Nov. 1884; *s.* father, late Maharaja Sir Sardul Singh Bahadur, G.C.I.E.; *cr.* 1892; *m.* 2nd *d.* of present Chief of Udaipur; served European War, 1914-15, *Address:* Kishengarh, Rajputana.

KISHEN PERSHAD, RAJAYAN-I-RAJAH MAHARAJAH BAHADUR, YAMINUS-SULTANAT, SIR, G.C.I.E., K.C.I.E.; Prime Min. of State of Hyderabad, 1901-12; *b.* 28 Jan. 1864; four *s.* *Educ.:* Nizam Coll., Hyderabad. Min. of Mil. Dept., 1893-1901. *Decorated* for services rendered to the Hyderabad State. *Address:* City Palace, Hyderabad; Deccan.

KITCHEN, ARTHUR JAMES WARBURTON, C.I.E., I.C.S., Commissioner, Rawalpindi, Punjab; *b.* 31 Jan. 1870; *Educ.:* Clifton College; Pembroke Coll., Cambridge (B.A.). Ent. I.C.S., 1893. (Retired).

KNAPP, ARTHUR ROWLAND, C.S.I. (1922); C.B.E. (1919). Chief Secretary to Govt., Madras. *b* 10 Dec. 1870. *Educ.:* Westminster School. Christ Church, Oxford. *m.* Florence Annie, *d.* of the late Dr. E. Moore, Princ. of St. Edmund's Hall, Oxford, and Canon of Canterbury. Entered Civil Service, 1891. Chief Secretary to Government, 1919; Reforms Commissioner, 1920; Temp. Member of Council in 1919-20, and in 1921. *Address:* Rosewood. Ootacamund, and Madras Club.

KNIGHT, MAJ.-GEN. SIR WYNDHAM CHARLES K.C.I.E. (1919), C.B., C.S.I., D.S O.; D.A. and Q.M.G., S. Command, since November 1919. *b.* 30 November 1863; *Educ.:* Cheltenham. Served N.-W. F., 1897; Mohamand Exp. as Road Commdt.; Tirah, 1897-98. S. African War, 1900-02; Ch. Staff Officer, Imp. Yeomanry, G O.C. Bombay Brigade, 1915-19, *Address:* Poona.

KOLHAPUR, H. H. SIR SHAHU CHHATRAPATI, MAHARAJA OF, G.C.I E, G.C.S.I., G.C.V.O., LL.D. (Canb.); M.R.A.S., Hon. Col. in Brit. Army; Hon. Col, 103rd Mahratta L. I.; *b.* 26th June 1874; adopted on 17th March 1884, from Kagal Chief's family, being natural born son of Jayasingrao Ghatge Sarjarao Vazarat Ma-ab, Chief of Kagal; *m.* Lakshmibai Saheb, *g.d.* of sister of H.H. late Ganpatrao Gaikwad, Maharaja of Baroda; one *s.* one *d.* *Educ.:* privately under a European tutor and guardian, Mr. S. M. Fraser, Rajkumar Coll., Rajkote. Has been administering affairs of Kolhapur State from 2nd April 1894. Decorated for loyalty, good government and in recognition of dignity of house. Has salute of 21 guns. *Address.* Kolhapur.

KOTAH, H. H. MAJOR SIR UMED SINGH BAHADUR, MAHARAO OF, G.C.S.I., G.C.I.E., K.C.S.I.; Hon. Lt.-Col. in Army; Hon. Major, 42nd Deoli Regt.; *b.* 1873; *s.* 1889. *Address:* Kotah, Rajputana.

KOTLA, HON. RAJA KUSHALPALSINGH OF, M.A. (Cal.), LLB. (All.) LL.D., Ph.D., Member of the Indian Legislative Assembly. *b.* 15 Dec. 1872; *s.* to Kotla estate, 1905. Mem. of U. P. Leg. Coun. since 1909. Mem. of Imp. Leg. Coun. as Rep of landed aristocracy of Prov of Agra, 1913; Sp. Mag., Vice-Chairman of Agra Dist. Bd.; Chairman of Firozabad Mun.; Trustee and Mem. of Managing Comm. of Agra Coll. *Address:* Kotla Fort, P.O. Kotla, Dist. Agra, U.P.

KRISHNAN, CHERUVARI, DEWAN BAHADUR, M.A., (Cantab.), Bar.-at-Law, Judge, High Court, Madras. *b.* 26 November 1868. *Educ.:* High School, Cannanore Government College, Calicut; Presidency College, Madras; Christ's College, Cambridge. Joined Madra Bar, 1891. Acted as Prof. of Chemistry,

Presidency College, Madras; Ch. Presidency Magistrate, Madras; Ch. Judge, Court of Small Causes, Madras; Govt. of India Scholar and Scholar Christ's, College Cambridge. Fellow, University of Madras. *Address:* Shenstone Park, Harrington Road, Madras.

KUTCH, H. H. MAHARAJA DHIRAJ MIRZAN MAHARAO SHRI KHENGARJI SAWAI BAHADUR OF, G.C.S.I., G.C.I.E.; *b.* 24 Aug. 1866; *s.* 1875; *m.* 1884. *Address:* The Palace, Bhuj, Kutch

LAHORE, BISHOP OF, since 1913, RT. REV HENRY BICKERSTETH DURRANT, M.A., D.D *Educ.:* Highgate Sch.; Pembroke Coll., Camb. Ch. Miss. Coll., Islington. Curate of St Matthew's, East Stonehouse, 1894-95; C.M.S. Missionary, Lucknow, 1896; St. John's Coll., Agra, 1897. Vice-Prin., 1900; Prin., 1911; Fellow, Allahabad Univ., 1906; served European War, Mesopotamia (Kut-el-Amara), 1915 (despatches). *Address:* Bishopsbourne, Lahore.

LAKHTAR, CHIEF OF, THAKOR KARAN SINGHI VAJIRAJJI, C.S.I., 1911; *b.* 1846. *Address:* Lakhtar, Kathiawar Agency, Bombay.

LAL, RAO BAHADUR BAKSHI SOHAN, M.L.A. (non-Mahomedan Constituency, Jullundur Divn.), Vakil, H. Ct., Lahore. *b.* 4 April 1857. Practised as Vakil in Kangra, Jullundur and Lahore. Elected Member, Punjab Leg. Council, 1912 and 1916. *Address:* High Court, Lahore.

LATIF, CAMRUDIN AMIRUDIN ABDUL, B.A.; late Mem. of Sec. of State's Adv. Comm. for Ind. Students; *b.* Cambay, 28 Sept. 1856; *Educ.:* Elphinstone Coll., Bombay; Bombay Univ.; practised as Vakil of Consular Courts, Zanzibar and Mombassa, 1880-93; Legal Adviser to successive Sultans of Zanzibar. Fellow, Bombay Univ.; J.P., Bombay; Hereditary Inamdar, Cambay State. *Address:* Chowpati, Bombay.

LATTHE, ANNA BABAJI, M.A., LL.B. (Bombay bay), Vakil. *b.* 1878.; *m.* to Igotsnabai Kadre of Kolhapur. *Educ.:* Deccan College, Poona. Prof. of English, Rajaram College, Kolhapur, 1907-1911; Educational Inspector, Kolhapur, till 1914; President, Deccan Ryots Assocn.; Member of the Indian Legislative Assembly. *Publications:* "Introduction to Jainism" (English)," Growth of British Empire in India" (Marathi). *Address:* Belgaum.

LAWRENCE, HENRY STAVELEY, C.S.I. Kaisar-i-Hind Medal; Member of Exec. Council, Bombay, since April, 1921. *b.* 20 Oct. 1870; *m.* to Rosamond Napier, *d.* of Col. E. Napier, late Carabineers. *Educ.:* Haileybury, Magdalen College, Oxford. Arrived in India 1890; Under Sec. and Sec. to Govt. of Bombay, 1897-1902; Dir. of Land Records and Agriculture, 1902-06; Collr. in Sind, 1908-13; Commsr. Southern Divn., 1914-16. Commissioner in Sind 1916-20. Ch. Sec. to Govt., 1920-21. *Publications:* Paper on Indian Agriculture before the Royal Society of Arts, 1909. *Address:* Secretariat, Bombay.

LEDGARD, SIR HENRY, Kt., *cr.* 1915; *b.* 20 Dec. 1853; *m.* 1881, Florence Robertson 10 years in a London Office; 8 years Secretary and Manager and Secretary. The Muir Mills Co., Ltd., Cawnpore; 29 years with Messrs. Cooper, Allen & Co., Ltd., Cawnpore, as partner, Managing Director and Advisory Director; President of the Upper India Chamber of Commerce, Cawnpore, 1901, 1902, 1903, 1914 and 1915, and represented that body on the Legislative Council of the United Provinces, India, 1912-15; Member of the Board of Industries of the U.P., 1914 and 1915 President of the Cawnpore Expansion Committee, 1913-15. Hon. Adviser to Government on Boot production, 1919-20. Member, Indian Postal Committee, 1920; Member, Indian Railway Committee, 1921. *Address:* Westfield, Cawnpore.

LEFTWICH, CHARLES GERRANS, C.B.E. (1919), Indian Trades Agent, East Africa. *b.* 31 July 1872. *m* Evadne Faweus of Alnmouth, Northumberland. *Educ.:* Christ's Hospital and St. John's College, Cantab. Entered I.C.S. 1896. Served in C. P. *Address:* Mombasa.

LEGGE, FRANCIS CECIL, C.B.E. V.D., (1919) Coal Transportation Officer, Railway Board *b.* 14 September 1873. *Educ.:* Sherborne School. *Address:* Bengal Club, Calcutta.

LE MESURIER, SIR HAVILLAND, K.C.I.E., C.S.I; Mem. of Exec. Council, Bihar and Orissa, since 1917; *b.* 22 June 1866; *m.* 1893. May Stuart, *d* of John Arthur Hopkins, I.C.S., *Educ.:* Rugby; Balliol Coll., Oxford. Entered I.C.S., 1884; Ch. Sec. to Govt. of E. Bengal, 1909; of Bihar and Orissa, 1912-16. *Address:* Patna.

LESLIE-JONES, FREDERICK ARCHIBALD, M.A., C.B.E. Principal of Mayo College. *b.* 1874. *m.* Christiana Mary Baskett. *Educ.:* Bromsgrove and Lincoln College, Oxford. Assistant and House Master, Marlborough College, 1897-1904. Princ., Aitchison College, Lahore, 1904-1917. *Publication:* A view of English History. *Address:* Mayo College, Ajmere.

LEVETT-YEATS, GERALD AYLMER, C.I.E, I.S.O., V.D.; Factory Supdt., Opium Dept., U.P., since 1903; *b.* 7 March 1863; *Educ.:* Private tuition. Managing Director, Opium Factory, 1919; retired 20 Decr. 1920. *Address:* Ghazipur, U. P.

LEY, ARTHUR HERBERT, C.I.E. (1918). Late temporary Secretary to Government of India, Commerce and Industry Department. *b.* 7 November 1879. *Educ.:* Winchester and New College, Oxford. Entered I.C.S., 1903. Director-General, Commercial Intelligence, 1914-16. *Address:* Simla.

LINDSAY, HARRY ALEXANDER FANSHAWE C.B.E., Dir.-General of Commercial Intelligence. *b.* 11 March, 1881. *Educ.:* St. Paul's School, London; Worcester College, Oxford. *m.* Kathleen Louise Huntington. Entered I.C.S. *Address:* Bengal Club, Calcutta.

LISTER, EDWARD, I.C.S., C.I.E.; Addl. Mem., Bihar & Orissa Leg. Council, and Sec., Rev and Jud. Dept., since 1918. *Educ.:* Sheffield Gram. Sch.; Wadham Coll., Oxford. Entered I.C.S., 1893. *Address:* Hazaribagh.

LITTLEHAILES, RICHARD, D.P.I., Madras; 1919; *b.* 14 February 1878. *Educ.:* Balliol Coll., Oxford and Kiel University. Joined I.E.S., 1903 as Prof. of Mathematics, Presidency College, Madras. *Address:* Moore Road, Madras.

LLOYD, ERNEST SAMPSON, B.A., I.C.S. *b.* 26 May 1870. *m.* Mary Young. *Educ.:* Clifton College and Lincoln College, Oxford. Arrived India 1894. Asstt. Collector and Magistrate till 1901; Under-Secretary to Govt., Rev. Deptt., 1901; Dist. Magte., Bangalore, 1902-04; President, Corporation of Madras, 1906-10; Collector and Dist. Magte., 1910-1918, Revenue Secretary to Govt. since 1919. *Address:* Madras Club, Madras.

LLOYD, CAPTAIN SIR GEORGE AMBROSE G.C.I.E. (1918), D.S.O. (1917), C.I.E. (1917), Foreign Orders Nile, St. Anne of Russia, and Order of Nahde. Governor of Bombay since December 1918. *b.* 19 September 1879. *Educ.:* Eton and Cambridge. *m.* the Hon Blanche, *d.* of Hon. Frederick Lascelles, M. P. (U.) West Staffs, 1910. Served in the European war, as Captain, Warwickshire Yeomanry, in Egypt. Gallipoli, Mesopotamia and the Hedjaz, Special Commissioner to report upon the future of British trade in Turkey, Mesopotamia and the Persian Gulf, 1908. *Address:* Bombay and Poona.

LODGE, FRANK ADRIAN, C.I.E.; Insp. Gen. of Forests, Hyderabad (Deccan), since 1914; *b.* 4 Nov. 1861. *Educ.:* Eton. Ent. I.F.S., 1883; Conservator, 1906-14. *Address:* Hyderabad, Deccan.

LOHARU, THE HON. NAWAB SIR AMIR-UD-DIN, AHMED KHAN BAHADUR, K.C.I.E.; *b.* 1860, *S.* 1884. Ruling Chief of Moghal tribe. Abdicated in favour of his Heir-apparent and Successor in 1920 voluntarily retaining titles and 9 guns salute as personal distinctions. For two years Mem. of Imp. Leg. Council and for two years Mem. of Punjab Council: attached to Pol. Dept. in Mesopotamia. *Address:* Loharu, Hissar.

LOW, SIR CHARLES ERNEST, K.C.I.E. 1919, C.I.E., B.A.; Sec. to Govt. of India, Com. & Ind. Dept., since Aug. 1918; *b.* 1869. *Educ.:* Rugby; Wadham Coll., Oxford. Ent. I.C.S., 1893. Member of the Indian Industrial Commission, 1918. President, Indian Munitions Board, 1919; Member, Board of Industries and Munitions since May 1920. (Retired).

LUCKNOW, BISHOP OF, RT. REV. GEORGE HERBERT WESTCOTT, D.D.; *Educ.:* Marlborough; Peterhouse, Cambridge (M.A.). Ordained, 1886. Consecrated Bishop, 1910 *Address:* Bishop's Lodge, Allahabad.

LUNAWADA, HIS HIGHNESS MAHARANA SIR SHRI WAKHATSINHJI DALELSINHJI, RAJAH OF, K.C.I.E.; *b.* 11 Aug. 1860; *S.* 1867; a Virpura Solunki Rajput; *Educ.:* Rajkumar Coll. Rajkot. *Address:* Lunawada, Rewa Kantha, Bombay.

LYALL, FRANK FREDERICK, C.I.E., I.C.S.; Commissioner, Ranchi Division. *b.* 12 June 1872. *Educ.:* Edinburgh Academy; Balliol Coll., Oxford. Ent. I.C.S., 1891. *m.* Miss. V. K. Markham (1906). *Address:* Ranchi.

MCCARTHY, FRANK, C.B.E., (1920), M.L.A., (Burma European Electorate). Late managing proprietor, *Rangoon Gazette* (retd. 1920). *b.* 1862. *Educ.:* Queen's Univ. Barrister-at-law (Gray's Inn.). Joined Editorial Staff, *Rangoon Gazette*, 1889. Chrmn., Burma Joint War Committee, 1917-19. *m.* May Innes. *Address:* Fairfield, Rangoon.

MACARTNEY, SIR GEORGE, K.C.I.E., C.I.E., Brit. Con.-Gen. at Kashgar, Chinese Turkestan, since 1911; *b.* Nankin (China), 19 Jan. 1867. *Educ.:* Dulwich Coll., France. Bachelier ès Lettres of Universite de France. Ent. service of Govt. of India, 1889; received thanks of Government of India, 1906. *Address:* Kashgar, Chinese Turkestan, *via* Gilgit (Kashmir).

MACKENNA, JAMES, C.I.E., I.C.S., Development Commissioner, Burma. *b.* Aug. 1872. *Educ.:* Dumfries Academy; Edinburgh Univ.; Balliol Coll., Oxford. Ent. I.C.S., 1894; Dir. of Agriculture, Burma, 1906; President, Indian Cotton Committee, 1917; President, Indian Sugar Committee, 1919. *Publication:* Agriculture in India. *Address:* Rangoon.

MACKENZIE, MAJOR JOHN, C.I.E.; 35th Sikhs; Comptroller of Household to following Viceroys of India; Earl of Minto, 1907-10; Lord Hardinge, 1910-16; Lord Chelmsford, 1916-21. *b.* 21 Sep. 1876. *m.* Dorothy Helen *o. d.* of Col. W.G. Massy, C.M.G., one *s.* one daughter. *Educ.:* Merchiston Castle Sch. R.M.C., Sandhurst. *Address:* C/o Messrs. Grindlay & Co., Bombay.

MACKISON, JAMES WALLS, B.Sc. (Edin.), M. Inst. C.E., J.P., C.I.E. (1921); Special Engineer, Development Works to Bombay Municipality. *b.* 18 Dec. 1869. *Educ.:* Dundee Institution, St. Andrew's University and Edinburgh University. Civil Engineer with Dundee Municipality from 1886 to 1906; Consulting Engineer in Private practice, 1906-11; Executive Engineer, Bombay Municipality, 1911-1920. *Address:* The 'Grange," Wodehouse Road, Bombay.

MACLAGAN, SIR EDWARD DOUGLAS, K.C.S.I. (1921), K.C.I.E., M.A., C.S.I.; Governor, Punjab, 1919. *b.* 1864. *Educ.:* Winchester; New Coll., Oxford. Ent. I.C.S., 1885; Under Sec., Govt. of India, Rev. and Agric. Dept., 1892; Ch. Sec. to Govt., Punjab, 1906; Sec. to Govt. of India, Rev. and Agric. Dept., 1910-14; Education Department, 1915. *Address:* Simla.

MACLEOD, JAMES JOHN, C.I.E.; Indigo planter, Tirhoot, India. *Educ.:* Edinburgh Inst. and Univ. of Edinburgh. Lt.-Col., Behar Light Horse. *Address:* Lalseriah, Segowlie, Chumparun.

MACLEOD, HON. SIR NORMAN CRANSTOUN; Kt. (1919); Chief Justice, Bombay, 1919. *b.* 10 July, 1866. *Educ.:* Wellington Coll.; New Coll., Oxford. Called to Bar, 1890; Offi. Assignee, Bombay, 1900; Mem. of Imp. Leg. Council, 1908; Puisne Judge, High Court, Bombay, 1910-19. *Address:* Mount Pleasant Road, Bombay.

MACMUNN, LIEUT-GEN. SIR GEORGE FLETCHER, K.C.B. (1917), K.C.S.I. (1919), D S.O. (1893); Quartermaster General, India, 1920. *b.* 14 August 1869. *Educ.:* Kensington Grammar School. *m.* Alice Emily, *d.* of Col. J. R. Watson. Joined R. A., 1888. Served in Upper Burma, 1892, with Kohat Field Force and in the Tirah, 1897, S. African war and in European war, Gallipoli, Egypt, Mesopotamia, where he was G.O.C. in C., 1919-20. Gold Medallist, U. S. Institution, India, 1904, and Royal Artillery Institution. *Publications:* The Armies of India. A Free Lance in Kashmir, Pike and Carronade. *Address:* Simla.

MACTAGGART, COLONEL CHARLES, C.S.I., 1919, C.I.E.; Insp.-Gen. of Civil Hosp., U.P. *b.* 1861. *Educ.:* Campbeltown Gram. Sch., Glasgow Univ. Ent. I.M.S., 1886; Insp.-Gen. of Prisons, 1902; Mem., Indian Factory Labour Commission, 1907-08; Mem. of U.P. Leg. Council, 1909. *Address:* Lucknow.

MACWATT, COL. ROBERT CHARLES, C.I.E.; Inspector-Genl., Civil Hospitals, Punjab and Administrative Medical Office, North-Western Ry.; Member, Punjab Leg. Council. *b.* 22 Jan. 1865. *Address:* Lahore.

MCPHERSON, HUGH, C.S I., 1919; B.A.; Member of Exec. Council, Bihar and Orissa, since April 1921. *b.* 3 May 1870; *Educ.:* Paisley Gram. Sch., Glasgow Univ.; Balliol Coll., Oxford. Passed into I.C.S., 1889; arrived India, 1891; Settlement Officer, Santal Parganas, 1898-1905; Director, Land Records, Bengal, 1907-12 Rev. Sec., Behar and Orissa, 1912-1915; Ch. Secy., Bihar and Orissa, 1915-1919; Mem, Board of Revenue, Patna, 1919; Secretary to Govt. of India, Home Dept., 1919-20. Member of Executive Council, Bihar and Orissa, 1921. *Address:* Patna and Ranchi.

MCWATTERS, ARTHUR CECIL, C.I.E. (1918), I.C.S. *b.* 13 September 1880. Controller of Currency, Decr. 1920. *Educ.:* Clifton, Trinity College, Oxford. Joined I.C.S., 1904. Served in the U. P. Under-Sec., Government of India, Department of Commerce and Industry, 1910-13. Wheat Commissioner, 1915. Controller of Hides and Wool, 1917. Chairman, Board of Special Referees, Excess Profits Duty Act, 1919. Secretary to Government of India Secretariat Procedure Committee, 1919. Represented Govt. of India on Commercial Mission to Persia, 1920. *Address:* Bengal Club, Calcutta.

M'IVER, JOHN ALEXANDER, I.S.O.; Supdt., Govt. Photozincographic Dept., Bombay C. S.; Land Rec. Dept., since 1906; *b.* 10 Sep. 1859. *Educ.:* privately, Yorkshire. Joined the B. C. S., 1880. *Address:* Poona.

MADGE, WALTER CULLEY, J.P., C.I.E.; *b.* 27 Jan. 1841. *Educ.:* High Sch., Edinburgh. Ex-President, Anglo-Indian Association; Ex-Member, Viceroy's Leg. Council; Mem., Royal Commission Indian Public Services, 1912. *Address:* Calcutta.

MADHAVA RAO, V.P., C.I.E. For 34 years in service of Mysore State in important capacities, being Mem. of Council of Regency, 1898-1902; Member of Exec. Council and Rev. Commsr.; Dewan of Travancore, 1904-06; Dewan of Mysore, 1906-09. *Address:* Baroda.

MADHAVLAL, SIR CHINUBHAI, Bt.; *see* Runchorelal.

MADRAS, BISHOP OF, since 1899, RT. REV. HENRY WHITEHEAD, D.D.; *b.* 19 Dec. 1853. *Educ.:* Sherborne; Trinity Coll., Oxford (Fellow; Lecturer, 1878-82; Tutor, 1882-83). Ordained, 1879; Principal of Bishop's Coll., Calcutta, 1883-99; Superior of Oxford Mission, Calcutta, 1890-99. Ex-officio Fellow, Madras University, 1900. Acting Metropolitan, 1913 and 1919. Hon. Fellow, Trinity College, Oxford, 1920. *Address:* Cathedral, Madras.

MAFFEY, SIR JOHN LOADER., K.C.V.O. (1921), C.S.I (1920), C.I.E., I.C.S.; Ch. Commr., N. W. F. Province. *b.* 1 July 1877. *Educ.:* Rugby; Christ Church, Oxford. Ent. I.C.S., 1899. Private Sec. to Lord Chelmsford; Chief Sec. to H. R. H. the Duke of Connaught during his tour in India. *Address:* Peshawar.

MAHALANOBIS, S.C.B.Sc., F.R.S.E., I. E. S.; Prof. of Physiology, Presidency Coll., Calcutta, since 1900. Fellow and Syndic, Calcutta University. *b.* Calcutta, 1867. *Educ.:* Edinburgh Univ. *m.* 1902, fourth *d.* of Keshub Chunder Sen and sister of H. H. the Maharani of Cooch-Behar. *Publications:* Muscle Fat in Salmon; Life History of Salmon; New form of Myograph; Teachers' Manual; Text Book of Science. *Address:* 210, Cornwallis Street, Calcutta.

MAHDI HUSAIN, KHAN WAHUD-UD-DAULA, AZOD-UL-MULK, NAWAB MIRZA, KHAN BAHADUR, C.I.E.; *b.* 1834. *Educ.:* India; Arabia. Travelled extensively in Arabia, Persia, Afghanistan, Baluchistan, and Europe; visited Mecca, Medina, Kaymiani. *Address:* Tirminigaz, Lucknow.

MAHUMUDABAD, RAJA OF, SIR MOHAMMAD ALI MAHOMED KHAN, KHAN BAHADUR, K.C.I.E., C.S.I. (1921), Home Member, Executive Council of the U. P. Government, 1921; Hon. Sec. at Lucknow Univ. Com.; Member, Central Standing Com. of the All-India Congress Com.; Vice-Chancellor of Aligarh Univ., *b.* 1877. *Educ.:* privately. *Address;* Mahmudabad House, Kaiserbagh, Lucknow.

MAHOMED, KHAN BAHADUR, NAWAB SYED I.S.O.; Ent. Govt. Service, 1873; Insp.-Gen. of Registration, Bengal; retired, 1913; a distinguished Urdu scholar and dramatist; wrote The Nawabi-Darbar, first drama in Urdu on English lines. *Address:* 82, Toltollati Lane, Calcutta.

MALAVIYA, PANDIT MADAN MOHAN; President of Indian National Congress, 1909 and 1918; *b.* Allahabad, 25 Dec. 1861; *Educ.:* Sanskrit at the Dharma Jnanopadesh Pathshala Govt. High School Muir Central Coll., Allahabad; and the Indian Union. Edited *The Hindustan*; B.A., (Calcutta), LL.B., Allahabad, Univ., 1892; Member, Prov. Leg. Council, 1902-12; Member, Imp. Leg. Council, 1910-1919; Member, Indian Industrial Commission, 1916-18; Vice-Chancellor, Benares Hindu University since 1919. *Address;* Benares.

MALER KOTLA, HON. KHAN, SIR ZULFIGAR ALI KHAN, K.C.S.I., C.S.I.; estate holder in Maler Kotla State; Member of Imp. Council representing Mohamedan community of Punjab; Ch. Minister of Patiala State, since 1911; *b.* 1875; *Educ.:* Chiefs' Coll., Lahore; Cambridge; Paris. *Address:* Lahore.

MALIK MOHAMMED UMAR HYAT KHAN (TIWANA), COLONEL THE HON. SIR, K.C.I.E., C.B.E., M.V.O; Member of Imp. Council, since 1910; *b.* 1875. *Educ.:* Chiefs' Coll., Lahore. One of largest landholders in Punjab. Attaché to H. M. the Amir, 1907; Deputy Herald, Delhi Durbar, 1911. *Address:* Kalra, Shahpur.

MALLIK, DEVENDRA NATH, B.A. (Cantab), Sc. D. (Dub.), F.R.S.E.; Prof. of Mathematics, Presidency Coll., Bengal, since 1908; *b.* Bengal 1866. *Educ.:* St. Xavier's Coll., Calcutta; Univ. Coll., London; Peterhouse, Cambridge. *Publications.* Numerous works on Mathematics, and Physics. *Address:* Astronomical Observatory, Presidency College, Calcutta.

MALLIK, MANMATH C.; *b.* Oct. 1853; called to Bar, 1875; contested (L.) St. George's Hanover Square, 1906; Oxbridge Division, 1910; Fellow, Zoological Society of London. *Address:* 241, Lower Circular Road, Calcutta.

MANIPUR, H. H. MAHARAJA CHURA CHAND SINGH, C.B.E.; *b.* 1886; S. 1891. State has area of 8,000 sq. miles, and a population of 384,016. Salute 11 guns. *Address:* Manipur, Assam.

MANGALORE, R. C. BISHOP OF; *see* Perini.

MANN, HAROLD HART, D. Sc., F.I.C., F.I.S., Ag. Director of Agriculture, Bombay Presidency; *b.* 16 Oct. 1872. *Educ.:* Elmfield Sch., York; Yorkshire Coll., Leeds. Pasteur Inst., Paris; Chemical Asst. for Research to R. A. S., 1895-98; Scientific Officer to Ind. Tea Assoc., Calcutta, 1900-07. Principal, Agricultural College, Poona and Agricultural Chemist to Govt. of Bombay, 1907-18. *Publications:* Numerous on questions relating to tea culture and manufacture, and many other Indian agricultural questions (with Sir G. Watt); The Pests and Blights of the Tea Plant; also on sociological subjects. *Address:* 1, Staveley Road, Poona.

MANT, REGINALD ARTHUR, C.S.I. (1919), B.A., *b.* 27 September 1870. *m.* Ellen Gertrude, *d.* of Col. E. O. Tandy, I.M.S. *Educ.:* Maryborough Gr. School, Queensland, and Trinity College, Oxon. Joined I.C.S. 1893. Under Secretary to Government of India, Finance Department, 1901, 1904-05. Offg. Joint Secretary, Military Finance Branch, 1908. Financial Secretary, Punjab, 1910-15. Secretary to Govt. of India, R. and A. Dept., 1916-1920; Offg. Member of Governor-General Council, April to Octr. 1919. *Address:* Simla and Delhi.

MARRIS, SIR WILLIAM SINCLAIR, K.C.S.I. (1921); K.C.I.E., Governor of Assam, since March, 1921. *b.* 1873; *Educ.:* Wanganui, N.Z.; Canterbury Coll., N.Z., Christ Church, Oxford. Passed I.C.S., open 1895; Under-Secretary to Govt. of India, 1901; Dy. Sec. to Govt. of India, 1904; service lent to Transvaal Govt., 1906; C.S. Commsr., Transvaal, 1907; Ag. Secy. to Govt. of India, Home Depart., March to May 1913; Insp.-Gen. of Police, U.P., 1916; Spec. duty, 1917-18. Home Secretary, 1919; Reforms Commissioner, 1919. *Address:* Shillong.

MARSHALL, SIR JOHN HUBERT, Kt., *cr.*, 1914; C.I.E., 1910; M.A., Litt. D., F.S.A.; Hon. A.R.I.B.A.; Vice-President of the India Society; Director-General of Archæology in India since 1902; *b.* Chester, 19 March 1876; *m.* 1902 Florence, *y. d.* of Sir Henry Longhurst, C.V.O. *Educ.:* Dulwich; King's College, Cambridge (scholar). Craven Travelling student; made journeys of exploration in Greek lands. *Address:* Benmore, Simla.

MARSHALL, LT.-GEN. SIR WILLIAM RAINE, G.C.M.G. (1919); K.C.B. (1917); K.C.S.I. (1918); C.B. (1916), commanding in Chief Southern Command, since November 1919, *b.* 29 October 1865. Served N. W. Frontier, 1897; Tirah, 1897; S. Africa, 1900-1902, European war, 1914-1916. G. O. C. in Mesopotamia, 1917-19. *Address:* Poona.

MARTEN, HON. MR. JUSTICE AMBERSON BARRINGTON, LL.D., M.A.; Puisne Judge of Bombay High Court since 1916. *b.* 8 Dec. 1870; *e. s.* of late Sir Alfred Marten, K.C., M.P. *Educ.:* Eton; Trinity College, Cambridge (1st Class Law Tripos). Studentship Council of Legal Education, 1895; called to Bar Inner Temple, 1895; Mem. of Bar Council, 1909-10; practised in Chancery Division till 1916. *Address:* High Court, Bombay.

MARTINDELL, HERBERT EDWARD WEST, M. R. San. I., C.I.E. (1921); Chief Engineer and Secretary to the Govt. of Burma, P. W. D. *b.* 14 Sept. 1866. *m.* Miss L. Davidson. *Educ.:* St. Paul's School, Darjeeling and Civil Engineering College, Sibpur. Joined the Burma P. W. D. as an Assistant Engineer on 6th February 1890. Had practical training in England from 17th June 1891 to 29th June 1893. Promoted to Executive Engineer from 21st March 1901, to offg. Superintending Engineer on 22nd February 1910 and was confirmed in that rank from 13th August 1914. Was appointed offg. Chief Engineer and Joint Secretary to the Government of Burma, P. W. D., from 18th July 1916. Proceeded on long leave from 15th October 1917. Returned to Burma on 9th January 1919 and was appointed as Chief Engineer, temporary rank, and Joint Secretary from that date. Confirmed in the appointment of Chief Engr. from 26th October 1919. Assumed charge of the appointment of Chief Engineer and Secretary to the Government of Burma from the 3rd November 1919. *Address:* Pegu Club, Rangoon and "Craig Dhu," Maymyo, Upper Burma.

MASANI, RUSTOM PESTONJI, M.A., J. P., Kaiser-i-Hind Silver Medal; Mun. Sec., Bombay; and Deputy Munpl. Commissioner, 1919. *b.* 23 Septr. 1876. *m.* 9 Decr. 1902, Manijeh P. Wadia. *Educ.:* New H. S. and Elphinstone Coll.; Jt. Propr. and Editor of *Gup Sup*, (1898); Editor of English columns

of *Kaisar-i-Hind* (1899-1900); Editor, *Indian Spectator* (1901-02). Jt. Hon. Secry., Society for the Protection of Children in W. India; also of the K. R. Kama Memorial Institute and the Parsi Girls' Schools Association and subsequently Trustee, Bombay Food Prices Committee (1914-17. *Publications*: English: Child Protection, Folklore of Wells. Gujarati *Dolatno Upayo*. (Use of Wealth); *Gharni tatha nishalni keluvni* (Home and School education), *Gansukh mala* (Health series); and novels named *Abyssinidno Habshi*; *Bodhlu Chandra Chal*; The Law and Procedure of the Municipal Corporation of Bombay. *Address*: Versova (*via* Andheri Station.)

MASOOD, SYED ROSS, Director of Public Instruction, Hyderabad (Deccan). *b.* 1889. *Educ.*: M.A.O. College, Aligarh, and New College, Oxford. Bar-at-law; Imperial Education Service. Headmaster, Patna School, 1913. Senior Prof. of History, Ravenshaw College, Cuttack, 1916. *Address*: Hyderabad.

MATHER, RICHARD B. Met., M.I.E. (Ind.) Metallurgical Inspector, Government of India. *b.* 19 Sept. 1886. *Educ.*: Royal Grammar School, Sheffield, Univ. of Sheffield. Mappin Medallist 1906; Metallurgist, Ormesby Iron Works, Middlesborough, 1907-1911, Dy. Dir. Metallurgical Research, War Office, Woolwich, 1911-1919: Member of Govt. Commission to investigate German and Luxemburg steel industry, 1919; Member of Iron and Steel Institute, Inst. of Metals, Faraday Society, Technical Inspection Institute. *Publications*: Papers for technical society. *Address*: Tatanagar, B. N. Ry.

MATHESON, MAJOR-GENERAL TORQUHIL GEORGE, C.B., 1918; C.M.G., 1919; G.O.C. Waziristan District; *b.* 4 Feb. 1871. *m.* 1900 Ella Louisa, *d.* of late Capt. James Wingfield Linton and Countess of Aylesford. *Educ.*: Eton. Served in 4th Batt., Bedforsdhire Regt. (Herts Militia), 1890-94; Commission in Coldstream Guards, 1894; Adjutant, 1st Batt.; 1897-1902; Regimental Adjutant, 1903-5; attached Gen. Staff, London District, 1907-11; appointed to the command of a Batt. Coldstream Guards, 1917; served S. African War (King's and Queen's medal, despatches; European War despatches 10 times. Brevet Lt.-Col., Brevet Col., C.B., C.M.G., Major-General); appointed to command an Infantry Brigade, 1915. A Division, 1917. *Address*: Guards' Club, London.

MAW, WILLIAM NAWTON, C.I.E., I.C.S.; Commissioner, Nagpur Division since 15th April 1921; *b.* 1 Aug. 1869; *Educ*: Wesley Coll., Sheffield; St. John's Coll., Cambridge (B.A.). Ent. I.C.S., 1893; in Secretariat respectively, as third, second, and Chief Secretary, 1906-12; Offg. Commr., Jubbulpore Div., C. P., Nov. 1918-1921. *Address*: Nagpur.

MAXWELL, SIR WILLIAM, K.C.I.E., C.I.E., M.V.O.; Managing Director, Grace Bros. (India), Ltd.; late Director-General of Posts and Telegraphs; *b.* 3 Jan. 1870; *m.* 1894, Elizabeth, *d.* of D. Harper. *Educ.*: Queen's Coll., Belfast; Trinity Coll., Dublin. Ent. I.C.S., 1889. *Address*: 4, Russell Street, Calcutta.

MAYHEW, ARTHUR INNES, Director of Public Instruction, Central Provinces. *b.* 27 September 1878. *m.* Mary Catherine, daughter of the late Sir James Davies, High Court Judge, Madras. *Educ.*: Winchester and New College, Oxford. (1st class Lit. Hum.) Inspector of Schools, Madras. *Educ.*: Adviser to the Nizam's Government. *Address*: Nagpur, C. P.

MAZUMDAR, THE HON. BABU AMBIKA CHARAN, M.A., B.L., Member, Bengal Legislative Council. *b.* 1851. *Educ*: at Barisal and Calcutta. Pleader; Chairman of the Faridpur Municipality for more than 20 years. President, Indian National Congress, 1916. *Publication*: Indian National Evolution. *Address*: Faridpur, Bengal.

MEAD, PERCY JAMES, C. S I.,(1921); G. I. E. (1914); Chief Secretary to Govt. of Bombay. *b.* 15 Nov. 1871. *Educ.*: Haileybury, and King's Coll., Cambridge; *m.* first, Frances Alexandra Cowie, and secondly, May Gertrude Maddock, Joint Author of Bombay Census Report, 1911. Was Ch. Sec. to Govt. of Bombay, 1919-20. *Address*: The Secretariat, Bombay.

MEARES, J. WILLOUGHBY, C.I.E. 1922); F.R.A.S. M. INST. C.E., M.I.E.E.; M. Am. I.E.E., M.I.E., (Ind.) Chief Engineer, Hydro. Electric Survey of India from 1921. *b.* 1871. *Educ.*: Winchester; Univ. Coll., London, Electrical Adv. to Govt. of India, 1904-1921. *Address*; Electrical Adviser'sOffice, Simla.

MEARS, SIR GRIMWOOD, KT. (1917), Ch. Justice, Allahabad, 1919. *Educ.*: Exeter College, Oxford. Barrister, 1895; Hon. Sec. to Bryce Committee on German Outrages, Hon. Sec. to R. Com. on rising in Ireland, 1916; Sec. to the Dardanelles Commission, 1916-17; British Embassy, Washington, 1918; at office of War Cabinet, Aug. 1918 to Jan. 1919; Paris, Jan. 1919; British Embassy, Washington, 1919. *Address*: Allahabad.

MEHTA, KHAN BAHADUR, SIR BEZONJI DADABHOY, KT. *Address*: Nagpur.

MEHTA, CHUNILAL VIJBHUCANDAS, M.A, LL.B. Minister, Bombay Govt., since Jan. 1921. *b.* 12 Jan. 1881. *m.* to Tarabai Chandulal Kankodiwala. *Educ*: St. Xavier's College, Bombay. Captain, Hindu XI; elected to the Bombay Municipal Corporation in 1907; Chairman, Standing Committee, 1912; President of the Corporation, 1916; Elected to the Bombay Legislative Council by the Corporation in 1916; elected to the City Improvement Trust, 1918; Chairman of the Indian Merchants' Chamber, 1918. Elected to the Bombay Port Trust, 1920. *Address*: 108, Ridge Road, Malabar Hill, Bombay.

MEHTA, DHANJIBHAI HORMASJ', L. M. & S. Kaiser-i-Hind Gold Medal (1920); Donat of St. John Silver Medal (1917); Raj Ratna Silver Medal, Baroda (1916); Ag. Prin. Medical Officer, State General Hospital, Baroda. *b.* 4 Feb. 1864. *m.* to a cousin. *Educ.*: at Sir Cowasji Jehangir Naosari Zarthosti Madressa and the Grant Medical

College, Bombay. Joined Baroda Med. Service, 1887; did Inoculation work with Prof. Haffkine; gave evidence on the value of inoculation before 1st Plague Commission. Has popularised St. John's Ambulance work all over Gujrat and Kathiawad and published books on Ambulance, Nursing, Hygiene, Midwifery, etc. *Address:* State General Hospital, Baroda.

MEHTA, THE HON. MR. LALUBHAI SAMALDAS, J.P., C.I.E., (1914); Merchant. *b.* October 1863. *m.* Satyavati, *d.* of Bhimrao Bolanath Divatia of Ahmedabad. *Educ*: Bhavnagar High School and Elphinstone College. Private Secretary to His Highness the Maharaja of Bhavnagar, Huzur Assistant to the Dewan, Bhavnagar, and Revenue Commissioner, Bhavnagar. Resigned service in 1899 and entered business at Bombay as Guaranteed Broker to Gysia Klynanjung. Helped in starting the Bombay Central Co-operative Bank, Bank of Baroda, Indian Cement Company, and the Nira Valley Sugar Company. Director in commercial firms and banks. Nominated to the Bombay Legislative Council in 1910, 1913, and 1916. Elected to the Council of State in 1920. President of the Industrial Conference at Karachi in 1913. Member of the Maclagan Committee on Co-operation, 1914-16. President, Mysore Co-operative Conference, 1916. Chairman, Mysore Co-operative Committee 1920-21. Member of the Senate of the Bombay University. Hon. Treasurer, Adam Wylie Hospital and Seva Sadan President, Indian Merchants' Chamber and Bureau 1917-18. Nominated Trustee of the Improvement Trust. Honorary Magistrate *Address*: 65, Apollo Street, Fort Bombay

MEHTA, MANUBHAI NANDSHANKAR, C.S.I. (1919), M.A., LL.B.; Diwan (Prime Minister) of Baroda, since 1916; *b.* 22 July 1868; *Educ.*: Elphinstone Coll., Bombay. Priv. Sec. to Gaekwar, 1899-1905; Rev. Min. and First Councellor. 1914-16. *Address:* Baroda.

MEHTA, ROOSTUMJEE DHUNJEEBHOY, J. P. C.I.E.; Merchant; Port Commissioner, 1888-91; Chairman, Local Board, Alipur. 1886-1917: Chairman, Manicktolla Municipality. Sheriff of Calcutta, 1893; Consul for Persia at Calcutta, 1899-1904. *Publications:* The Exchange Imbroglio: Indian Railway Economies: Indian Railway Policy. *Address:* 9, Rainey Park, Ballygunge, Calcutta.

MEKRAN, WAZIR OF, whose territory forms the northern littoral of Gulf of Oman. *Address:* Mekran, Baluchistan.

MEULEMAN, MOST REV. BRICE, S.J.; Catholic Archbishop of Calcutta, since 1902; *b.* Ghent, 1 March 1862. *Educ.*: St. Barbe's Coll., Ghent. Joined Soc. of Jesus, 1879; nominated Superior of Jesuit Mission in Bengal 1900. *Address:* Calcutta.

MILLER, SIR DAWSON, KT., K. C., Ch. Justic of Patna High Court, since 1917; *b.* Dec. 1867. *Educ.*: Durham Sch. and Trinity Col. Oxford Bar, Inner Temple, 1891. *Address.* High Court, Patna.

MILLER, SIR LESLIE, KT. (1914), C.B.E. (1919). Chief Judge, Mysore since 1914. *b.* 28 June. 1862. *m.* Margaret Lowry, O.B.E. *Educ.*: Charterhouse, and Trinity College, Dublin. Entered I.C.S, 1881. Judge of the Madras High Court, 1906-14. *Address:* Abshot, Bangalore.

MINCHIN, LT.-COL. ALFRED BECKETT, C.I.E; Political Agent in Bundelkhand since 1917. *b* 3 Dec. 1870. Ent. army, 1891; Captain, 1901; Major, 1909; served Isazai Exp., 1892; Chitral Red. For, 1895; Malakand and Swat, 1897; Asst. to Gov.-Genl.'s Agent, Rajputana, 1899-1904; Pol. Ag, Bundelkund, 1902; Assistant Sec. to Gov. of India, For. Dept., 1908. *Address*: Nowgong, Bundelkhand.

MISRA, PYARE LAL. Bar-at-Law, *b.* Aug. 17, 1872. *Educ.*: Saugor, C. P. and Nagpur Hislop College, Gray's Inn, London. Was elected to the C. P. Council in 1917 and to the Legislative Assembly in 1920. Is Vice-President of the Municipality, Hon. Secry., Co-operative Bank, Member of the C. P. Board of Agriculture; First President of the Hindi Literary Conference held at Raipur, Mem. All-India Hindi Association. *Publications*: Hindu Law in Hindi, History of English journals in Hindi, a Small pamphlet in English criticising the Calcutta University Commission's Report during Lord Curzon's Viceroyalty. *Address*: Chhindwara, C.P.

MITTER, SIR BINOD CHUNDER, KT. (1918), Barrister and Advocate, Calcutta. Member, Council of State (1921). *b.* 1872. *m.* Miss Charushilla De. *Educ.*: Presidency College and Ripon College. Twice officiated as Advocate-General, Bengal; Vice-President, National Liberal League; Member of Moderate Deputation to England, 1919. *Address*: 2-1, London Street, Calcutta.

MODI, JIVANJI JAMSHEDJI, SHAMS-UL ULAMA (1893), C.I.E. (1917), Sec., Parsi Panchayat, Bombay. *b.* 26 October 1854. *Educ.*: Elphinstone High School, Elphinstone College. *m.* Shirinbai, *d.* of the late H N. Shaklatwala. Has published numerous historical and antiquarian works chiefly dealing with Parsi history and religion. Is Ph. Doc. (Hon.) Heidelberg, and Officier de l'Instruction publique. Received the Campbell Gold Medal, Bombay Branch R. Asiatic Society (1917). *Address:* 1, Wodehouse Road, Bombay.

MODI, MAGANLAL THAKORDAS BALMUKUNDAS, I.C.E., C.I.E., (1921); Cotton Merchant trading as Narandas Rajaram & Co., *b.* 5 Feb. 1852. *m.* Manglabai. *Educ*: Surat Govt. High School and Poona Engineering College. Served Government in Irrigation Deptt., in Khandesh, 1882-83; Cotton Merchant since 1884. *Address*: 3, Esplanade Road, Fort, Bombay.

MODY, HORMUSJI PEROSHAW, M.A. (1904), LL.B. (1906): Advocate, High Court, Bombay; *b* 23 Sept. 1881; *m* Jerbai, *d.* of Kawasji Dadabhoy Dubash. *Educ*: St. Xavier's Coll., Bombay. Mem. of Bombay Mun. Corp. and Chairman of its Standing Committee, Member of the Board of Trustees of the Improvement Trust. *Publications:* The Political Future of India (1908). Life of Sir Pherozeshah Mehta (1921). *Address:* Cumballa Hill, Bombay.

MOHAMMED YAMIN KHAN, B.A., of the Allahabad University (1911), Bar-at-Law; Senior Vice-Chairman, Municipal Board, Meerut. *b.* June 1888. *m.* to a cousin *Educ.* at Meerut College, M.A.O., College, Aligarh and England. Practising as Barrister in Meerut, since Dec. 1914. Acted as Secretary of U. P. War Fund for Meerut District: Secretary, Y.M.C.A. Funds, Secretary, Dist. War League. Was elected a member of the Municipal Board, Meerut, in 1916 and Vice-Chairman a year later. Elected member Legislative Assembly, 1920. *Address*: Junnut Nishan, Meerut.

MOIR, THOMAS EYEBRON, C.I.E.; Commissoner of Labour, Madras. *b.* 1874. *Educ.*: Fettes Coll., Edinburgh; Wadham Coll., Oxford. Ent. I.C.S., 1897. *Address*: Fort St. George, Madras.

MOLONY, JOHN CHARTRES, M.A., I.C.S.; Political Agent for Banganapalle. *b.* 27 Feb. 1877; *Educ.*: Port Royal Sch., Enniskillen; Trinity Coll., Dublin. President, Madras Corporation, 1914-19; Supdt. of Census, Madras, 1910-11. *Address*: Madras.

MONIE, PETER WILLIAM, C.S.I. (1920); M.A. (Glasgow); B.A. (Oxon.); Deputy Director of Development, Bombay, *b.* 30 March 1877 *Educ.*: Irvine Royal Acad.; Glasgow Univ., Balliol Coll., Oxford; I.C.S., Asstt. Coll. Asstt. Judge; Under-Sec. to Govt.; Under Sec. to Govt. of India, Home Dept; Ag Collr; Sec. to Govt., General Dept; Municipal Commr., Bombay, 1917-1920. *Address*: 16 Mount Pleasant Road, Malabar Hill.

MONTGOMERIE, ALEXANDER. M A., C.I.E. (1921), I.C.S, Political Secretary to Govt. of Bombay. *b.* 27 Feb. 1879; *m* Katherine MacDonald Rankin. *Educ*: Glasgow High School, Glasgow University: Balliol College, Oxford Joined Indian Civil Service, 1903: served in various districts of Bombay Presidency. *Address*: care of Messrs. King, King & Co., Bombay.

MOOKERJEE, SIR ASUTOSH SARASWATI, SASTRAVACHASPATI, KT, C.S.I., M.A., D.L., D.Sc.; *ex* Judge of Calcutta High Court since 1904; Vice-Chancellor of Univ. of Calcutta, since 1906; *b.* 28 June 1864; *Educ.*: S. Suburban Sch.; Presidency Coll.; City Coll.; Fellow and Syndic of Calcutta Univ. since 1889; Add. Mem. of Imp. Council, 1903-04; Fellow of numerous learned societies. *Address*: 77, Russa Road North, Bhowanipur, Calcutta.

MOOKERJEE, SIR NARAYAN, Zamindar of Uttarpara; *b.* April 1859. Member, Bengal Legislative Council, since 1918; *m.* 1878; one *s. Educ.*: Uttarpara School; Presidency College, Calcutta; Chairman of the Uttarpara Municipality since 1887; Chairman of the Bench of Hon. Magistrates, 1889; Managing Committee of the British Indian Association, 1889; a Member of the Asiatic Society; a life Member of St. John Ambulance Association; Member of the Provincial Advisory Committee for Indian Students, 1918; a Member of the National Liberal League, and Vice-President of Bengal Humanitarian Association; elected to Executive Committee of All India Landholders' Association, 1919. *Address*: Uttarpara near Calcutta.

MOOKERJEE, SIR RAJENDRA NATH, K.C.I.E., Civil Engr.; *b.* 1854; *Educ.*: London Missionary Institution at Bhowanipur; Presidency College, Civil Engineering Branch, Calcutta Senior Partner in Martin & Co., Calcutta; Member of Indian Industrial Commission, 1917-1918; Member of Indian Railway Committee, 1920-1921, of Board of Trustees for Improvement of Calcutta; of Board of Trustees, Asiatic Museum, Calcutta; a Fellow of Calcutta Univ.; Member of Court of Visitors, Ind. Inst. of Science; Sheriff of Calcutta, 1911; Member of the Board of the Governing Body of Bengal Engineering College. A Governor of the Imperial Bank of India. *Address*: 7, Harington Street, Calcutta.

MOORE, MAJOR-GENERAL SIR JOHN, C.B., 1915; K.C.M.G., *cr.* 1919; C.M.G. 1919; F.R.C.V.S., Director of Veterinary Services in India; *b.* 24 May 1864; *m.* 1903, Adelaide Mary, *d.* of late Benjamin Murphy, Prior Park, Clonmell. Served Dongola, 1896 (medal); South Africa War, 1899-1900 (despatches: Queen's Medal, 3 clasps; prom. Vet. Major); European War, France and Flanders, 1914-18 (despatches, C.B., K.C.M.G); Officer Legion of Honour; promoted Hon. Major-Gen. 1st Jan. 1918. *Address*: Army Headquarters, India.

MOORE, PIERCE LANGRISHE, C.I.E.; Insp. Gen. of Police, Madras, since 1914; *Educ.*: Cheltenham; Christ Church, Oxford. Ent. I.C.S., 1896; President, Madras Corporation, 1910-14. *Address*: Madras.

MORVI, H. H. THAKUR SAHEB SIR WAGHJI RAVAJI, G.C.I.E.; *b.* 7 April 1858; S. 1870. *Educ.*: Rajkumar Coll. State has area of 822 sq. miles and population of about 96,697. *Address*: Morvi, Kathiawar.

MOUNTFORD, LEWIS JAMES, C.B.E., Commissioner, Southern Division, Bombay Presidency, 1916-20; Addl. Mem. of the Viceroy's Legislative Council, 1919. *b.* 1 Aug. 1871. *Educ.*: Dulwich Coll. and Pembroke Coll. (Cantab.). Joined I.C.S. Asst. Collr., 1892; Manager of Sind Encumbered Estates, 1896; Collr. of Larkhana, 1903; Spl. Collr., Bombay, 1905; Collr., Sholapur, 1907; Satara, 1911: Poona, 1913; Ahmedabad, 1916. Member of Standing Committee, Presidency Recruiting Board, 1917. *Publications*: Pamphlet on the Relations between Debtor and Creditor in Sind. *Address*: The Secretariat, Bombay.

MUDDIMAN, SIR ALEXANDER PHILLIPS; KT. (1922); C.S.I. (1920); C.I.E.; President, the Council of State. *b.* 14 Feb. 1875. *Educ.*: Wimborne Sch. Ent. I.C.S., 1897; served in Behar and Bengal, in various capacities. Dy. Sec., Govt. of India, Leg. Dept., 1910-15. Sec. to Govt. of India, Leg. Dept., 1915-20. *Address*: Delhi.

MUKERJI, see Mookerjee.

MULJI, VASANJI TRIKAMJI, RAO SAHIB, SIR, KT., J.P.; Hon. Magistrate; Mem., Bombay Cotton Exchange; *b.* 8 July 1866. *Address*; Malabar Hill, Bombay.

MULLICK, SIR BASANTA KUMAR, KT. (1920); Judge, Patna High Court, since 1916. *Educ.*: Univ. Col. Sch.; King's Coll., Cambridge. Ent. I.C.S., 1887; Actg. Judge, Calcutta High Court, 1913; Puisne Judge, 1915. *Address:* Bankipore.

MUMTAZUDDOLAH, NAWAB SIR MOHAMMAD FAIYAZALI KHAN, K.C.V.O., K.C.I.E., C.S.I., C.B.E., Nawab of Pahasu, Minister, Jaipur State; *b.* 4 Nov. 1851; late Member of Supreme and Provincial Legislative Councils. *Address:* Nawab's House, Jaipur.

MURSHEDABAD, NAWAB BAHADUR OF, K.C.S.I., K.C.V.O., The Hon. Ihtisham-ul-Mulk, Rais-ud-Dowla, Amir-ul-Omrah, Nawab Asef Kudr Syud Wasef Ali Meerza, Khan Bahadur, Mahabut Jung; premier noble of Bengal, Behar and Orissa; 38th in descent from the Prophet of Arabia; *b.* 7 Jan. 1875; *m.* 1898, Nawab Sultan Dulin Fugfoor Jahan Begum Saheba. *Educ.*: in India, under private tutors and in England, at Sherborne, Rugby, and Oxford; has six times been Mem. of Bengal Leg. Council. *Address:* The Palace, Murshidabad.

MURTRIE, DAVID JAMES, O.B.E., I.S.O; Dy. Dir.-Gen., Post Offices, 1916-1921 (retired); *b.* 18 Dec 1864; *Educ.*: Doveton Prot Coll., Madras. Ent. Govt. Service in Post Office, 1884; Pres. Postmaster, Bombay, 1913-16. *Address*: 6, Ali Askar Road, Bangalore.

MURZBAN, JEHANGIR B., C.I.E., (1921); Propr. of *The Jame-Jamshed*. *b.* 21 Sept. 1848 *Educ.*: Elphinstone Coll. Was Assist. Manager, *The Times of India*, for 7 years under Col Nassau Lees; manager, *The Bombay Gazette*, for 9 years. Propr., *The Advocate of India*, for 5 years. Editor and Propr. *The Jame-Jamshed*, for 30 years. Trustee, Sir J. J. Benevolent Institution. Founder of Parsi Widows' Relief Fund. *Publications:* 30 vols. of travel, fiction, etc. *Address:* Shallemar, Hughes Rd., Bombay.

MYSORE, H.H. MAHARAJA OF, SRI KRISHNARAJA WADIYAR BAHADUR, G.C.S.I.; G.B.E., *b.* 4 June 1884; *s.* father, 1895. Invested with full ruling powers by Lord Curzon, at Mysore, 1902; present at Delhi Durbar, 1903. Area of State is 29,444 square miles, and has population of nearly 6,000,000. *Address:* The Palace, Bangalore, Mysore; Fern Hill, Ootacamund.

MYSORE, YUVARAJA OF, SIR SRI KANTIRAVA, NARASIMHARAJA WADIYAR BAHADUR, G.C.I.E., Extraordinary Mem. of Council in Mysore; *b.* 5 June 1888; *y. s.* of late Maharaja Sri Chamarajendra Wadiyar Bahadur. Takes keen interest in welfare of people and in all matters of education, health, and industry. *Address:* Mysore.

NABHA, MAHARAJA SRI RIPUDAMAN SINGHJI MALAVENDRA, BAHADUR OF, F.R.G.S.; M.R.A.S.; *b.* 14 March 1883; *S.* 1911. *Educ.*: privately. Travelled good deal in India and abroad; Mem., Viceroy's Council, 1906-08; Pres. of Ind. Nat. Soc. Confec., 1909; attended Coronation of King, accompanied by Maharani, 1911; made handsome contributions towards various War Funds and Loans including gift of fully-equipped Hospital Ship for Mesopotamia. *Address:* Nabha, Punjab.

NAG, GIRIS CHANDRA, RAI BAHADUR, M.A., B.L., Member, Legislative Assembly, *b.* 14 Feb 1864. *m.* Miss K. Deo, *d.* of Rai Saheb P. C. Deb of Sylhet. *Educ.*: Calcutta Presidency College. Professor, Ravenshaw Coll., Cuttack (1886-1890); Pleader, Sylhet Judge's Court, 1890-1892; Member, Assam Provincial Service, 1892-1919. *Address*: Bakshi Bazaar, Dacca.

NAGOD, RAJA JADUBIND SINGH, RAJA OF; *b.* 30 Dec. 1855; *S.* 1874; dynasty has ruled at Nagod for over nine centuries; State has area of 501 square miles, and population of 84,097; salute 9 guns. *Address:* Nagod, Baghelkhand.

NAGPUR, BISHOP OF, since 1903, RIGHT REV. EYRE CHATTERTON, D.D., F.R.G.S.; *b.* 22 July 1863; *m.* 1910 Lilian Agnes Haig, 2nd *d.* of Henry Alexander Haig, 43, Kensington Park Gardens. *Educ.*: Haileybury; Dublin Univ.; ordained 1887. Head of Dublin University Mission, Chota Nagpur, 1891-1900. *Publications*: The Story of 50 years. Mission Work in Chota Nagpur (S.P.C.K.), 1900: The story of Gondwana (Isaac Pitman & Co.), 1916; with the Troops in Mesopotamia, 1916; Mesopotamia Revisited, 1917. *Address*: Bishop's House, Nagpur.

NAGPUR, R. C. BISHOP OF; *see* Coppel.

NAIDU, SAROJINI; Fellow of Roy. Soc. of Lit. in 1914; *b.* Hyderabad, Deccan, 13 Feb. 1879. *Educ.*: Hyderabad; King's Coll., London; Girton Coll., Cambridge. Published three volumes of poetry in English, which have been translated into all Indian vernaculars, and some into other European languages; also been set to music; lectures and addresses on questions of social, religious, and educational and national progress; specially connected with Women's Movement in India, and welfare of Indian students. *Address:* Hyderabad, Deccan.

NAIR, MANNATH KRISHNAN, DEWAN BAHADUR (1915); Member, Madras Legislative Council. *b.* August 1870. *Educ.*: Alathur; Calicut; and Christian College and Law College, Madras. Vakil, Calicut Bar, Ch. Justice, Travancore High Court, for four years. Dewan, Travancore, 1914-July (1920). *Address*: Palghat, Malabar District.

NAIR, *see* Sankaran Nair.

NANAK CHAND, MASHERUD-DOWLA, RAI BAHADUR, C.S.I., C.I.E., Sirdar and Jagirdar of Indore State; *b.* 1860; *Educ.*: Delhi and Indore. Minister, Indore State, 1895-1913 (except for ten months). *Address:* Santoshkuti, Indore; Mohalla Dassa, Delhi.

NANDY, MAHARAJA SIR MANINDRA CHANDRA, K.C.I.E.; Add. Mem. of Imp. Council. *Address*: Kasimbazaar, Bengal.

NANJUNDAYYA, H. VELPANURU, C.I.E.; *b.* 13 Oct. 1860; *Educ.*: Wesleyan Mission Sch., Mysore; Christian Coll., Madras; Madras Univ. (Fellow, 1895). Ent. service of Mysore Govt., 1885; Judge, Chief Court of Mysore,

1904; Mem. of Council and Ch. Judge of Chief Court; retired 1916; Vice-Chancellor, Mysore Univ. *Address:* Malleswaram, Bangalore.

NARIMAN, SIR TEMULJI BHICAJI, KT., Chief Physician, Parsi Lying-in Hospital; Vice-President, College of Physicians and Surgeons; *b.* Naosari, 3 Sep. 1848; *Educ.:* Grant M. C.; Elphinstone Coll.; Fellow of Bombay Univ., 1883; J.P.; a Syndic in Medicine, 1891; a Dean in Faculty of Medicine, 1901-02; Mem., Bombay Leg. Council, 1909; Mem. of Provincial Advisory Committee, 1910. Member, Bombay Medical Council, 1913. *Address:* Bombay.

NARSINGARH, H. H. SRI HUZUR RAJA SIR ARJUN SINGHJI SAHIB BAHADUR OF, K.C.I.E.; *b.* 10 Jan. 1887; belongs to Paramar or Ponwar branch of Agnikal Rajputs; *s.* 1897. *Educ.:* Mayo Coll.; Imp. Cadet Corps. Invested 1909; State is 734 sq. miles in extent, and has population of 1,01,426; salute of 11 guns. *Heir: s.* Shri Maharaja Kumar Shri Vikram Singh Bahadur, *b.* 21 Sept. 1909. *Address* Narsingharh.

NATARAJAN, KAMAKSHI, B.A., (Madras University), 1889, J.P., Editor, *The Indian Social Reformer*, Bombay; *b.* 24 Sept. 1868. *Educ.:* St. Peter's H. S., Tanjore; Pres. Coll., Madras; Govt. Coll., Kumbakonam; and Law Coll., Madras. Headmaster, Aryan H. S., Triplicane, Madras; Asst. Editor, the *Hindu*, Madras; Fellow of Bombay Univ. and Mem. of Syndicate (1918); Mem., Bandra Municipality; Pres., Madras Prov. Soc. Confec., Kurnool, 1911; and Pres., Bombay Prov. Soc. Confec., Bijapur, 1918. Presidents, Mysore Civic and Social Progress Conference, 1921. *Publications:* Presidential addresses at above conferences: Report of Census of Hyderabad (Deccan), 1911. *Address:* *The Indian Social Reformer* Office, Fort, Bombay, and Tata's Bungalow, Khar Road, Bandra, Bombay.

NATESAN, G. A., head of G. A. Natesan & Co. and Editor, *The Indian Review*. *b.* 25 August 1879. *Educ.:* High School, Kumbakonam; St. Joseph's School, Trichinopoly; H. H. School, Triplicane; Presidency College, Madras University B.A. (1897), Fellow of the Univ. and Commissioner, Madras Corpn. Has taken a leading part in Congress work. Joined Moderate Conference, 1919. Sec., Madras Liberal League. Joint Secretary, National Liberal Federation of India. *Publications:* chiefly patriotic literature and speeches, etc., of public men., "What India Wants," "Autonomy within the Empire." *Address:* 60, Thambu Chetty Street, Madras.

NATHUBHAI, TRIBHOVANDAS MANGALDAS, J.P.; Hon. Mag. and Fellow of Univ., Bombay; Sheth or head of Kapol Banya community; resigned presidentship after tenure thereof for 25 years, 1912. *b.* 28 Oct. 1856. *Educ.:* St. Xavier's Coll., Bombay. Was for 20 years an elected Mem. of Bombay Mun. Corpn.; has been Hon. Mag. since establishment of Courts of Bench Magistrates in Bombay. *Address:* Sir Mangaldas House, Lamington Road, Bombay.

NAWANAGAR, H. H. MAHARAJA JAM SAHEB OF, KUMAR SHRI RANJITSINHJI, K.C.S.I. Hon. Major in army; *b.* Sarodar, 10 Sept. 1872; *Educ.:* Rajkumar Coll., Rajkot; Trinity Coll., Cambridge. First appearance for Sussex C. C. C., 1895; head of Sussex averages same year; head of Sussex averages, 1895-1902; champion batsman for all England in 1896 and 1900, scoring 2,780 runs with an average of 59·91; went with Stoddart's All England XI. to Australia, 1897-98; served European War, 1914-15. *Address:* Nawanagar, Kathiawar.

NEOGY, KSHITISH CHANDRA, M.L.A. (non-Mahomedan Electorate, Dacca Divn., E., Bengal). Vakil, High Court, Calcutta. Journalist. *b.* 1888. *Educ.:* Presy Coll., Calcutta. Dacca Coll. *m* Sreematy Lila Dev., is a member of the All-India Council of the Nat. Lib. Fedn. Elected Member of the Dacca Univ. Court, 1921. *Address:* 84, Amherst Street, Calcutta.

NEPAL, MAHARAJA CHANDRA SHUM SHERE JUNG BAHADUR RANA, G.C.B., G.C.S.I., G.C.M.G., G.C.V.O., D.C.L., (Oxon, 1908); F.R.G.S., Hon. General in British Army; Hon. Colonel of 4th Gurkha Rifles · Thong-lin-pimma-kokang-wang-ssyan (Chinese 1902); Prime Minister and Marshal of Nepal; *b.* 8 July 1863. *Educ.:* Durbar H. S., Khatmandu. Entered army as a Colonel; Commander-in-Chief, 1901; Maharaja, Prime Minister, and Marshal, 1901, during European War, 1914, presented 31 machine guns, first gift of munitions, to the King, and placed whole of military resources of State at the King's disposal. *Address:* Singha Durbar, Khatmandu, Nepal.

NEVILL, COLONEL HENRY RIVERS, B.A.; O.B.E., (1919); V. D. (1920); C.I.E. (1921), Indian Civil Service. *b.* 24 May 1876. *m.* Euphan, *d.* of T. Maxwell, Esq. of Irvine, Ayrshire. *Educ.:* Charter House, Oriel College, Oxford. Entered Indian Civil Services, 1899; Posted to U. P. Commanded U.P. Horse, 1913-17; services placed at disposal of C.-in-C., Novr. 1917; Asstt. Adjutant-General at A. H. Q. and from March 1921 as G.S.O. 1st Grade; Hon. Colonel. *Publications:* Dist. Gazetteers of the United Provinces. *Address:* Army Headquarters, Simla.

NEWBOULD, HON. MR. BABINGTON BENNETT; Puisne Judge, High Court, Calcutta, since 1916; *b.* 7 March 1867. *Educ.:* Bedford Sch.; Pembroke Coll., Cambridge. Ent. I.C.S., 1885. *Address:* 10, Harington Mansions, Calcutta.

NIHAL SINGH, REV. CANON SOLOMON, B.A. Evangelistic Missionary; *b.* 15 Feb. 1852 *Educ.:* Govt. H. S., Lakhimpur; Canning Coll., Lucknow, ordained, 1891; Hon. Canon in All Saints' Cathedral, Allahabad, 1906. *Address:* 2, Pioneer Road, Allahabad.

NOLAN, JAMES JOSEPH, F.J.I., Director of Publicity, Burma; Journalist, Editor of *Rangoon Times*, 1915-1920; *b.* Limerick, 7 May 1869. *Educ.:* Cresent Coll., Limerick; King's Coll., London. Asst. Editor, *Hearth and Home*, 1897, Editor, 1906-12; late Editor of *The Citizen*; Editorial staff, *Black and White*, 1903-12; Asst. Editor of *Canada*, 1912-14. *Address:* Pegu Club, Rangoon.

NORMAND, ALEXANDER ROBERT, M.A.,B.Sc. Prof. of Chemistry, Wilson Coll., Bombay. *b.* Edinburgh, 4 March 1880; *Educ.*: Royal H. S. and Univ., Edinburgh. *Address*; Wilson College, Bombay.

NORMAN, COL. COMDT. CLAUDE LUMSDEN, D.S.O. (1917), M.V.O. (1908), A.D.C. (1918). Comdt, Cavalry School, Saugor, C. P. *b.* 19 Feb. 1876. *Educ.*: Marlborough and R. M. C., Sandhurst. *m.* Emlyn Margaret, *d.* of Sir Alfred Reynolds, of Ayot Bury, Herts. First Commission, 1896. Entered Indian Army, 1897. Squadron Officer, Q.V.O. Corps of Guides, 1899; served on N. W. Frontier, 1897-98 and in Somaliland, 1903-04; Bt. Lt.-Col., 1915; Bt. Col., 1918. Colonel, 1919. *Address*: Cavalry School, Saugor, C. P.

NORTON, EARDLEY, Bar.-at-Law (Lincoln's Inn). *b.* 19 Feb. 1852. Called 1876. *Educ.*: Rugby Sch.; Merton Coll., Oxford. Advocate of the High Courts of Bengal (1888); and Madras (1879). *Address*: Temple Chambers, Calcutta.

NOYCE, FRANK, I.C.S., C.B.E. (1919); *b.* 4 June 1878. *Educ.*: Salisbury Sch. and St. Catharine's Coll., Cambridge. *m.* Enid, *d.* of W. M. Kirkus, of Liverpool. Entered I.C.S., 1902. Served in Madras. Under Sec. to Govt. of India, Revenue and Agricultural Dept., 1912-16. Sec., Indian Cotton Committee, 1917-18; Controller of Cotton Cloths, 1918-19; Vice-President and subsequently President, Indian Sugar Committee, 1919-1920. *Publication*: England, India and Afghanistan (1902).

OBAIDULLA KHAN, NAWABZADA HAFIZ MOHAMAD BAHADUR, C.S.I.; Col.-in-Ch., Bhopal Victoria Imp. Ser. Lancers; Hon. Major, British Army; *b.* 3 Nov. 1878: 2nd *s.* of the Begum, Ruler of Bhopal. *Educ.*: at home by private tutors; A.D.C. to Viceroy, 1906; Commission as Captain in H. M.'s Army, 1908; accompanied the Begum on pilgrimage to Mecca; takes keen interest in education; is Trustee of M.A.O. Coll., Aligarh. *Address*: Jahan Numa Palace, Bhopal.

OLDFIELD, HON. JUSTICE FRANCIS DU PRE, Puisne Judge, Madras H. C., since 1913, *b.* 30 June 1869; *Educ.*: Marlborough; Trinity Coll., Cambridge; Fellow, Madras Univ., 1916. Ent. I.C.S., 1890. *Address*: Rutland Gate, Madras.

ORCHHA, H. H. SARAMAD-I-RAJAHA-I-BUNDELKHAND, MAHARAJA MAHINDRA SAWAI, SIR PRATAP SINGH BAHADUR, G.C.I.E., K.C.I.E., G.C.S.I.; *b.* 1854; *S.* brother 1874. State has area of 2,080 sq. miles and population of over 300,000. *Address*: Tikamgarh, Bundelkhand.

PALANPUR, CAPTAIN H. H. ZUBDA-TUL-MULK DEWAN MAHAKHAN TALEY MUHAMMAD KHAN BAHADUR, K.C.I.E. (1920). State has area of 1,750 sq. miles and population of over 200,000. *Address*: Palanpur.

PALMER, RT. REV. E. J.; *see* Bombay, Bishop of.

PALMER, VEN. JOSEPH JOHN BEAUCHAMP, M.A.; Archdeacon of Kottayam, since 1907; Principal, Cambridge Nicholson Institution, Kottayam; *b.* 10 Feb. 1866. *Educ.*: Wells G. S. privately; St. John's Coll., Camb. Missionary, C.M.S., 1891; C.N.I., Kottayam; Surrogate, 1908. *Address*: Kottayam.

PANNA, H. H. MAHENDRA MAHARAJA YADVENDRA SINGH OF; K.C.I.E. (1922), *b.* 1893; *S. cousin* on his deposition, 1902; *m.* 1912, Kunvari Shri Manhar Kunvarba, *o. d.* of Maharajah of Bhavnagar State; has area of 2,596 sq. miles, and population of about 200,000. *Address*: Panna, Bundelkhand.

PARANJPYE, THE HON. MR. RAGHUNATH PURUSHOTTAM, Minister, Bombay Government, since January 1921. *b.* Murdi, 16 Feb. 1876; *Educ.*: Maratha H. S., Bombay; Fergusson Coll., Poona; St. John's Coll., Cambridge (Fell.); Paris and Gottingen; First in all Univ. exam. in India; went to England as Govt. of India scholar; bracketed Senior Wrangler at Cambridge, 1899; Princ. and Prof. of Math., Fergusson Coll., Poona, 1902-20; has taken prominent part in all social, political, and educational movements in Bombay Pres.; Vice-Chancellor of new Indian Women's Univ, 1916-20; Bombay Leg. Council, 1913-21. Awarded the Kaisar-i-Hind Gold Medal in 1916. *Publications*: Short Lives of Gokhale and Karve. *Address*: The Secretariat, Bombay.

PAREKH, SIR GOKULDAS KAHANDAS, KT. (1921); *b.* 24 Jan. 1847. *Educ.*: Bombay University. *m.* Parsanbai, daughter of Hargovandas Tribhovandas of Cambay. School Master, Surat High School, Deputy Inspector, Gujarati Schools; Bombay; Pleader; High Court, Bombay; Member, Bombay Legislative Council, 1897-1920; presided at Satara Provincial Confce., Gujarat Political Confce., Surat, 1919; All-India Social Confec., Bombay, 1904; Temperance Confec., Lahore, 1909; and Temperance Confec., Ahmedabad, 1916. Instituted preliminary inquiries into land revenue collection, 1899-1900, which resulted in special Government inquiry. *Address*: New Queen's Road, Bombay.

PARTAB BAHADUR SING, RAJA, TALUQDAR OF KILA PARTABGARH, C.I.E. Hon. Magistrate; Hon. Mem. of U. P. Leg. Council; *b.* 1866. *Address*: Kila Partabgarh, Oudh.

PARTABGARH, H. H. SIR RAGHUNATH SINGH BAHADUR, MAHARAWAT OF; K.C.I.E., *b.* 1857; *S.* 1890. State has area of 886 sq. miles and population of 62,704; salute of 15 guns. *Address*: Partabgarh, Rajputana.

PATIALA, H. H. MAJOR-GENERAL SIR BHUPINDER SINGH, MAHARAJA DHIRAJ OF; G.C.S.I., G.C.I.E., G.C.B.E., F.R.G.S., F.R.Z.S., M.R.A.S., M.R.S.A.; *b.* Oct. 1891; *S.* father (Sir Rajindra Singh Bahadur, G.C.S.I.), 1900. *Educ.*: Aitchison Coll., Lahore. Patiala is premier State of Punjab belonging to the group known as Pulkian, is 5,492 sq. miles in extent, and has population of 1,407,659. Ruling Prince receiving salute of 19 guns. *Address*: Patiala.

PATON, NIGEL FAIRHOLT, Managing Partner. Graham & Co., Calcutta. *b.* 6 Nov. 1867. *m.*, Nora Ermengarde, *d.* of the late William Skinner, Edinburgh. *Educ.*: Edinburgh Academy and Edinburgh University. Chairman, Bombay Chamber of Commerce,

1919-20; Mem., Imp. Legislative Council, 1919-20; Trustee of the Port of Bombay, 1915-20; Major, 15th Bombay Battalion, A.F.I., Hon. A.D.C. to Governors of Bombay, 1917-1921. *Address:* 3, Alipore Lane, Calcutta.

PATTANI, SIR PRABHASHANKAR DALPATRAM, K.C.I.E., President of Council of Administration, Bhavnagar State, 1920; Member of Exec. Council of Government of Bombay, 1912-1915; of the Bombay Legislative Council, 1916; of the Imperial Legislative Council, 1917; of the Council of India, 1917-19; *b.* 1862. *Educ.:* Morvi, Rajkote, Bombay. *Address:* Anant wadi, Bhavnagar.

PAUL, KANAKARAYAN TIRUSELVAM, O. B. E. (1918), Nat. Gen. Sec., Y. M. C. A. of India, Burma and Ceylon. *b.* 24 March 1876. *Educ.:* Madras Christian College, Law College, Teachers' College. *m.* Miss K. Narasinga Rao, Teacher. Headmaster, College Lecturer, Municipal Commissioner and Chairman, General Secretary, N.M.S., of India. *Address:* 5, Russell Street, Calcutta.

PEARS, STEUART EDMUND, C.I.E., I.C.S; Pol. Ag., Khyber, N.-W. F. Prov., 1912-18; Vice-President, Prov. Recruiting Board and Ch. Recruiting Officer, N.W.F.P., since 1918. *b.* 1875. *Educ.:* Edinburgh Univ.; Trinity Hall, Cambridge. Ent. I.C.S., 1898. *Address:* Peshawar.

PEASE, COLONEL HENRY THOMAS, C.I.E., V.D., A.V.S.; Hon. A.D.C. to C.-in-C. India, Prin., Vet. Coll., Punjab, since 1912; Commdt., Punjab L. H. *b.* 20 July 1862. *Educ.:* St. Edmund's Coll., Old Hall Green, Ware. Insp.-Gen., Civ. Vet. Dept., Simla, 1907-12. *Address:* Veterinary College, Lahore.

PECHEY, WILLIAM PRIMROSE, General Traffic Manager, B. B. & C. I. Railway. *b.* 1 October 1869. *Educ.:* Repton. In business houses in London, 1887-96. Joined Grindlay & Co., Bombay, 1896. Assistant Secretary to the Agent, B. B. & C. I. Railway, 1898. Assistant to General Traffic Manager, 1900. Traffic Superintendent, 1909. General Traffic Manager, 1918. Acting Agent, 1919. *Address:* Byculla Club, Bombay.

PERINI, RT. REV. PAUL, S.J., D.D.; Bishop of Mangalore, since 1910; *b.* Brandola, Italy, Jan. 1867. *Educ.:* various College of Society of Jesus in Austria, England, and Belgium. Joined Society of Jesus, 1883; Rector and Prin. of St. Aloysius Coll., Mangalore, for six years. *Address:* Bishop's House, Mangalore

PERTAB SINGH, SIR; *see* Jodhpur, Regent of.

PETIT, SIR DINSHAW MANOCKJEE, 2nd Baronet; *s.* of late Framjee Dinshaw Petit, 2nd son of 1st Baronet; *b.* 7th June, 1873; *s.* his grandfather, Sir Dinshaw Manockjee, under special remainder, 1901, and changed his name from Jeejeebhoy Framji Petit to Dinshaw Manockjee Petit; Merchant and cotton mill-owner; Member, Bombay Legislative Council; J. P. for Bombay; a Delegate of Parsee Ch. Matrimonal Court of Bombay; Pres. of Association for Amelioration of Poor Zoroastrians in Persia, the Petit Charity Funds, Petit Institute, and Parsee Orphanage, and Chairman and Member of Managing Committees of the principal Parsee charitable institutions in Bombay; *m.* Dinbai; *d.* of Sir Jamsetjee Jejeebhoy, 3rd Bart., and has issue. *Address:* Petit Hall, Malabar Hill, Bombay.

PETMAN, CHARLES EARLE BEVAN, C.I.E. *b.* 9 September 1866. *Educ:* Privately and at Trinity College, Cambridge. Advocate, Calcutta H. Court, 1892 and of Chief Court, Punjab, 1892. Government Advocate, Punjab, 1909; Judge of the High Court, Lahore, from April to Aug. 1920 and from Octr. 1920 to Febr. 1921. *Publications:* "Report on frauds and bribery in the Commissariat Department"; "P. W. D. Contract Manual" (Revised Edition). *Address:* Lahore.

PETRIE, DAVID, C.I.E., C.B.E., M.V.O. *b.* 1879 *Educ.:* Aberdeen Univ.; Ent. Ind. Police, 1900; Asst. Dir., C.I.D., Simla, 1911-12; Spec. duty with Home Dept., since 1915. On special duty with H.R.H. the Duke of Connaught, 1921. *Address:* c/o King, King & Co., Bombay.

PEYTON, MAJ.-GENERAL SIR WILLIAM ELIOT, K.C.B. (1917), K.C.V.O. (1917), C.B. (1913), D.S.O. (1898); G.O.C., United Provinces District. *b.* 7 May 1866; *m.* 1st, Mabel Maria; (*d.* 1901); *d.* of late Lt.-Gen. Hon. E. T. Gage, C.B., 3rd *s.* of 4th Viscount Gage; 2nd, 1903, Gertrude, (*d.* 1916); *d.* of Maj.-General A.R. Lempriere and widow of Capt. Stuart Robertson, 14th Hussars. *Educ.:* Brighton College. Enlisted 7th Dragoon Guards, 1885; 2nd Lt., 7th Dragoon Guards, 1887; Capt., 15th Hussars, 1896; Major-General, 1914; commanded 15th Hussars, 1903-7; served Dongola Expeditionary Force, 1896 (despatches, Khedive's medal with two clasps); Soudan, 1897 (dangerously wounded and horse speared); Soudan, 1898 (despatches, D.S.O., 4th class Medjidie, clasp); South Africa, 1899-1900 (Brevet Lieut.-Col., despatches, Queen's medal, 3 clasps); commanded Meerut Cavalry Brigade, 1908-12; late Military Secretary to H. E. the Commander-in-Chief in India; Delhi Herald of Arms Extraordinary for the occasion of the Coronation Durbar, 12 Dec. 1911; commanded 2nd Mounted Division on Gallipoli Peninsula; action of 21 August 1915 and final evacuation 19 Dec. 1915 (despatches twice); commanded Western Frontier Force, Egypt, in expedition against Senussi, including the reoccupation of Barani and Sollum, and the rescue of the ship-wrecked British prisoners of H.M.S. Tara (received special thanks of the Admiralty; despatches); commanded 40th Division during operations in France and Flanders, June 1918-March 1919 (Commandeur Legion d'Honneur); Order of the Nile, 2nd Class, 1916. *Address:* Meerut.

PIGGOTT, HON. MR. JUSTICE THEODORE CARO, B.A., I.C.S.; Puisne Judge, Allahabad, since 1914; *b.* Padua, 26 Oct. 1867. *Educ.:* Kingswood Sch. Bath; Christ Church, Oxford. Ent. I.C.S., Jud. Commsr. of Oudh, 1911. *Address:* High Court, Allahabad.

PIGOTT, LT.-COL. ROBERT EDWARD PEMBERTON, C.I.E., V.D., M.I.E.E.; Ch. Elec. Eng., B.B. & C. I. Ry., since 1908; Lt.-Col. Commdg. B. B. & C. I. Ry., Regiment, A.F.I.; *b.* 6 Oct

1866, *s.* of Col. E. C. Pemberton-Pigott, late of the Essex Regt. *Educ.*: Trent Coll., Nottingham. Commanded 12th (Service) Bn. Suffolk Regt. in France during the war. *Address*: Bombay.

PILKINGTON, HARRY SEYMOUR HOYLE, C.I.E., M.V.O.; Postmaster-General, United Provinces. *b.* 1869. Ent. Ind. P.O., 1890; Asst. Dir.-Gen., 1909-16; served with F. P. O. in China Exp., 1900-02; took charge of postal arrangements during visits to India of Prince and Princess of Wales, 1905-06; Ameer of Afghanistan, 1906-07; and King George and Queen Mary, 1911-1912; Dir., Postal Services with Indian Forces in France, 1914-1916; mentioned in despatches. *Address:* Nagpur.

PO SA, MAUNG, I.S.O. (1911), K.S.M. 1893, *b.* Toungoo, 13 May 1862. *Educ.*: St. Paul's R.C.M. Sch., Toungoo. Senior Member, Burma Probv. Jd. Ser. since 1911; Interpreter to Prince of Wales during visit to Burma, Jan. 1906. Also to three Viceroys, 1898, 1901, 1908; Dist. Judge, 1916; Offg Sessions Judge, 1918; Retired June, 1918; Asstt. Dir. Recruiting, July to Decr. 1918. *Address*: Thaton.

PRASAD, GANESH, M.A. (Cantab.), D.Sc.: University Professor of Mathematics at Benares Hindu University; President of the Benares Mathematical Society. *b.* 15 Nov. 1876. *Educ.*: Balha; Allahabad; Cambridge; Gottingen, Member of Court Council and Senate, Hindu Univ.; Fellow of the Allahabad Univ.; formerly Univ. Professor of Applied Mathematics at Calcutta Univ. *Publications* "Constitution of Matter and Analytical Theories of Heat" (Berlin, 1903); text-books on Differential Calculus and Integral Calculus (London, 1909 and 1910); and many other original papers published in the mathematical and scientific journals of England, Germany, Italy and India during 1900-1920. *Address*: 37, Benares Cantt.

PRASAD, THE HON. MR. JUSTICE JWALA, B.A., LL.B. Puisne Judge, Patna High Court, since 1916; Acting Chief Justice, 1921. *b.* 1875. *m.* 1888, *d.* of Munshi Mangul Sen Singh, Zamindar and retired Dy. Commissioner. *Educ.*: Patna College, Calcutta University; Muir Central College and Allahabad University; Vakil, Calcutta and Allahabad High Courts, Fellow of Patna University. *Address*: Patna.

PRATAB SINGH, SIR; *see* Jodhpur, Regent of.

PRATT, THE HON. MR. JUSTICE EDWARD MILLARD; Judge, High Court, Bombay, 1918; *b.* 29 August 1865; *Educ.*: Dulwich Coll. and Univ. Coll., London. Appointed I. C. S., 1886; Dist. and Sess. Judge, 1897; Leg. Jem., 1905; Jud. Commsr. of Sind, 1910. *Address*: Crismill, Malabar Hill, Bombay.

PRATT, FREDERICK, I.C.S.; Commissioner, Central Division, Bombay Presidency, *b.* 4 Dec. 1869. *Educ.*: Dulwich Coll.; Hertford Coll., Oxford. *Address*: 19, Queen's Gardens, Poona.

PRICE, VENERABLE CYRIL, M.A.; Archdeacon of Nagpur, since 1910. *Educ.*: King Edwards' Sch., Birmingham; Worcester Coll., Oxford. Priest, 1891; Senior Chaplain, 1910. *Address:* Jubbulpore.

PRICE, EDWIN LESSWARE, B.A. (Oxon). Bar-at-law, O.B.E. Member, Legislative Assembly; Merchant, Karachi. *b.* 8 July 1874. *Address*: "Newcroft", Shizni Road, Karachi.

PRITHWIS CHANDRA RAY, Editor-in-Chief of the *Bengalee* (Calcutta). *b.* 1870. *m.* 1888, 2nd *d.* of Babu Dwarkanath Roy Choudhury of Santosh (Mymensingh) *Educ.*: Mymensingh Zilla School and Presidency College, Calcutta. Editor of the *Indian World* from 1905-1914; Founder of the National Liberal League, Calcutta; Secretary, 21st and 26th Sessions of the Indian National Congress held in Calcutta in 1906 and 1911; Secretary, Bengal Social Reform Association from 1908 to 1914; Member of the Moderate Deputation to England, 1919, and the Bengal Landholders' Delegate to England in 1920. *Publications*: "Poverty Problem in India," "Indian Famines", "Our Demand for Self-Government", and "A Scheme of Indian Constitutional Reforms." *Address*: 174, Lower Circular Road, Calcutta.

PROES, ERNEST MARINUS, C.S.I. (1921); Chief Engineer and Secretary to Govt., P.W.D., Bombay. *b.* Oct. 28, 1871. *m.* Alice M.E. Gourdon de Genoulhac. *Educ.* Royal Indian Engineering College, Coopers Hill. Asstt. and Exec. Engineer, P.W.D.; Under-Secretary to Govt., P. W. D.; Superintending Engineer, P.W.D.; C.R.E. of the B.E. Force in Franco 1914-17; *Address*: P. W. D. Secretariat, Bombay.

PUDUKOTA, H. H. RAJA MARTAND BHAIRAVA TONDIMAN BAHADUR, RAJA OF, G.C.I.E., *b.* 1875; *s.* grandfather; 1886; *m.* 1915. State has area of 1,178 sq. miles, and population of 411,886 and has been ruled by Tondiman dynasty from time immemorial. Salute 11 guns. *Address:* Pudukota.

PUDUMJEE, NOWROJEE, 1st Class Sardar of Deccan, Bombay; C.I.E.; *b.* 1841; *Educ.*: Poona Coll. under Sir Edwin Arnold, war mem. of Bombay Leg. Council; Promoter and Chairman of several Industrial and Banking Companies. *Address:* Pudumjee House, Poona.

PURSHOTAMDAS THAKURDAS, C.I.E. (1919), M.B.E.; Addl. Mem. Leg. Council (1916); Cotton Merchant; *b.* 30 May 1879; *Educ.*: Elph. Coll., Bombay. Trustee of Port of Bombay; Chairman, Bombay Cotton Exch.; Member of Indian Railways Committee, 1920-21. *Address:* Malabar Castle, The Ridge, Bombay.

PURVES, ROBERT EGERTON, C.I.E.; P. W. D., retired; *b.* 1859; *Educ.*: Thomason Coll., Roorkee; Ex. Eng., 1895; Supdt. Eng., 1907; Ch. Eng. and Sec. to Govt., Punjab Irrigation Branch, 1913-14: retired, 1914; since practising as Hydraulic Eng. and Irrigation Expert. *Address*: c/o Messrs. King Hamilton & Co., Calcutta.

QUILON, BISHOP OF; *see* Benziger, Rt. Rev. A. M.

RADHANPUR, H. H. MAHOMED JALALUDHIN-KHAN BABI, BAHADUR, NAWAB OF; *b.* 1 April 1889; Pathan, Babi, Mahomedan *Educ.*: Rajkumar Coll., Rajkot. *S.* brother,

1910; State has area of 1,150 sq. miles, and population of 65,567; Salute 11 guns. *Address:* Radhanpur.

RAGHUNATHDAS RAI BAHADUR, DIWAN BAHADUR CHAUBE, C.S.I.; *b.* Nov. 1849; *Educ.:* Humes H. S., Etawah; Govt. Coll., Agra. Entered Native State Service in Rajputana; was Mem. of State Council, Kotah; Diwan, Kotah State, since 1896. *Address:* Kotah.

RAHIM, THE HON. SIR ABDUR, M.A., Kt. (1919); Judge, Madras High Court, since 1908. *b* September, 1867. *m.* Nisar Fatima Begum, *Educ.:* Government High School, Midnapore; Presidency College, Calcutta. Called to the Bar (Middle Temple), 1890; practised as Advocate, Calcutta; Presidency Magistrate, Calcutta, 1900-03; Fellow, Madras University, since 1908; Member of the R Commission on Public Services, 1913-15, officiated as Chief Justice, Madras, July-October 1916, and July to October 1919 *Publication:* "Principles of Mahomedan Jurisprudence." *Address:* College Bridge House, Egmore, Madras.

RAHIMTOOLA, SIR IBRAHIM, KT., C.I.E.; Mem., Exec. Council, Bombay; was Mem. of Imp. Council; Mem., Bombay Leg. Council, *b.* May 1862. *Address:* Pedder Road, Cumballa Hill, Bombay.

RAINY, GEORGE, C.S.I. (1921), C.I.E. (1918), Ch. Sec. to Govt. of Bihar and Orissa since 1919. *b.* 11 Feb. 1875. *Educ.* Edinburgh Academy and Merton Coll., Oxford. Entered I.C.S., 1899. Under-Sec. to Govt. of India, Commerce and Industries Dept., 1906-09; Member, Imperial Delhi Comttee. 1914-16; Dy. Sec. to Govt. of India, Finance Dept., 1916-19. *Address.* V. S. Club, Calcutta.

RAJARATHNA MUDALIYAR, PAKAM, C.I.E., Diwan Bahadur; served in Salt Dept. since 1860; Insp.-Gen., Registration, 1896; Mem. of Madras Council, 1896-1902. *Address.* Madras.

RAJKOT, THAKUR SAHEB LAKHAJI BOWAJI. *b.* 17 Dec. 1885. *Educ.:* Rajkumar Coll., Rajkot. State has area of 282 sq. miles, and population of 49,938; Salute of 9 guns *Address:* Rajkot.

RAJWADE, COL. GANPATRAO RAGHUNATH RAO RAJA, MASHIR-I-KHAS BAHADUR SHAUKAT-JUNG, C.B.E.; A.D.C. to H. E. The Viceroy; Army Member, Gwalior Govt. and Inspector-General, Gwalior Army; Member of His Highness' Majlis-i-Khas; ranks as First Class Sardar in the Bombay Presidency *b* Jan. 1884. *Educ.:* Victoria Collage; *Address:* Gwalior.

RAMPAL, RAJA; *see* Kutlehr.

RAMPUR, COL. H. H. ALIJAH, FARZAND-I-DILPIZIR-I-DAULAT-I-INGLISHIA, MUKHLIS UD-DAULAH, NASIR-UL-MULK, AMIR-UL-UMARA, NAWAB SIR SAYED MOHAMMAD HAMID ALI KHAN BAHADUR, MUSTAID JUNG; G.C.S.I. (1921), G.C.I.E., G.C.V.O.; A.D.C. to King Emperor; *b.* 31 Aug. 1875; *S.* 1889. State has area of 892 sq. miles and population of 531,712; Salute of 15 guns. *Address;* Rampur State, U. P.

RANGOON, BISHOP OF, since 1910; RT. REV. ROLLESTONE STERRITT FYFFE, D.D. *m.* 1914, Annis, *d.* of late Herbert Hardy of Danhurst, Sussex, one *s Educ.*: Clifton Coll., Emmanuel Coll., Cam.; Ordained, 1894; S. P. G. Missionary, Mandalay, 1904-10. *Address:* Bishop's Court, Rangoon.

RANJITSINHJI; *see* Nawanagar.

RANKIN, THE HON. MR. JUSTICE GEORGE CLAUS, Judge, High Court, Calcutta. *b.* 12 August 1877. *m.* Alice Maud Amy Sayer. *Educ.:* Trinity College, Cambridge. Barrister (Lincoln's Inn) 1904. Practised on Northern Circuit. R. Garrison Artillery, 1916-18. *Address:* High Court, Calcutta.

RAO, RAO SAHIB S. M RAJA RAM, Editor, *The Wednesday Review. b.* 24 December 1876. *Educ:* S. P. G. and St. Joseph's College, Trichinopoly. Started *The Wednesday Review* in 1905 and *The Zamindar and Progress* (monthly) incorporated into the *Feudatory and Zemindari India* in 1919. *Address:* Trichinopoly and 16, Harrington Road, Chetpet, Madras.

RAUCH, JOSEPH SAMUEL PHELPS, Col. in the Salvation Army. *b* April 1, 1866. *m.* Janie Scott. *Educ.:* Cape Town (South African College). Has served in the Salvation Army as Chief Secretary respectively in Germany, S. Africa and Holland Has also been Territorial Commander of the West Indies and subsequently of Gujarat, W. India; also served on the International Staff in London. *Address:* Broadway, George Town, Madras.

RAWLINSON, 1st Baron, *cr.* 1919; HENRY SEYMOUR RAWLINSON, 2nd Bt., *cr.* 1891; G.C.B., *cr.* 1919; K.C.M.G., *cr.* 1918; G.C.V.O., *cr.* 1917; K.C.B., *cr.* 1915; C.B. 1900; Commander-in-Chief in India since Nov. 1920; *b* 20 Feb 1864; *e s.* of Maj.-Gen. Sir Henry Creswick Rawlinson, Bt., and Louisa, *d* of H. Seymour Knoyle Wilts, *S.* father 1895; *m.* 1890, Meredith, *o d.* of Coleridge J. Kennard. *Educ.:* Eton; R. M. C. Sandhurst; Staff College, Camberley (P.S.C.). Entered 60th K.R. Rifles, 1884; A.D.C. to Sir Frederick Roberts, Commander-in-Chief in India, 1887; served with Mounted Infantry, Burma campaign (medal and clasp); resigned A.-D.-C.-ship and returned to England, 1889; entered Staff College, 1892; exchanged into Coldstream Guards, 1892; served in Soudan campaign as D.A.A.G. to Lord Kitchener, 1898; present at battles of Atbara and Khartoum (medal and two clasps, despatches twice); served in S. African war (two medals and eight clasps); A.A.G. (Ladysmith siege), Natal, 1899; A. A.G. Headquarters, S. Africa, 1900; commanded Mobile Column, 1901-2 (despatches three times); European war, 1914-18; commanded the Fourth Army despatches twice, K.C.B., prom. Maj.-General K.C.M. G.); Commandant, Staff College, 1903-6; commanded 2nd Brigade, Aldershot, 1907-9; commanding 3rd Division, Salisbury Plain, 1910; General, 1917; Member of Army Council; Grand Officers, Legion of Honour; Order of Danilo (Montenegro) 1st Class, 1917; commanded H. M. Forces in North Russia, 1919; 1st Class Order of

Leopold, Belgium; 2nd Class Order of St. George, Russia. *Publication*: The Officers' Note-book. *Address:* Army Head Quarters, India.

RAWLINSON, HUGH GEORGE; Principal, Karnatak Coll., Dharwar; *b.* 12 May 1880; *Educ.:* Market Bosworth Grammar Sch. and Emmanuel Coll., Cambridge; (Exhibitioner and Scholar; B.A., 1st Class; Classical Tripos, 1902; M.A. 1908); Lecturer in English and Classics, Royal College, Colombo, 1903-08; Hare University Prize, 1908. Entered I.E.S. as Professor of English Literature, Deccan Coll., Poona, 1908; Ag. Principal, Gujarat Coll., Ahmedabad, 1911; *ditto*, Deccan College, 1915; Fellow of the Royal Historical Society, 1916; Aptd. to Karnatak Coll., Dharwar, 1917. *Publications:* Bactria, the History of a Forgotten Empire; Indian Historical Studies; Shivaji, the Maratha; Intercourse between India and the West; The Beginnings of British India; An Account of the Old English Factory at Surat: New Edition of Forbes' Ras Mala. *Address*: Dharwar.

RAY, MAHENDRANATH, C.I.E., M.A., B.L.; Vakil, Calcutta High Court; *ex*-Mem., Bengal Council; *b.* Oct. 1862. *Educ.:* Presidency Coll., Calcutta. Mem. of Syndicate, Calcutta Univ., since 1910. *Address*: 8, Khooroo Road, Howrah, and 2, Boloram Bose's 1st Lane, Bhawanipur, Calcutta.

RAY, PROFULLA CHANDRA, C.I.E., D.Sc. (Edin.); Ph. D. (Cal.); Sen. Prof. of Chemistry, Univ. Coll. of Sc., Calcutta; *b.* Bengal, 1861. *Educ.:* Calcutta; Edinburgh Univ. Graduated at Edinburgh. D.Sc.; Hon. Ph.D., Calcutta Univ., 1908; Hon. D.Sc., Durham Univ., 1912. Dean of Fac. of Sc. Univ. of Calcutta, 1915. *Address:* College of Science, Calcutta.

READING, 1st EARL OF, *cr.* 1917; RUFUS DANIEL ISAACS, VISCOUNT ERLEIGH, *cr.* 1917; 1st Viscount Reading, *cr* 1916; Baron, *cr.* 1914; Kt., *cr.* 1910; G.C.B., *cr.* 1915; P.C. 1911, K.C.V.O., *cr.* 1911; Viceroy and Governor-General of India since April, 1921 Lord Chief Justice of England, 1913-21; President of Anglo-French Loan Mission to U.S.A., 1915; Special Envoy to U.S.A., 1917; High Commissioner and Special Ambassador to U.S.A., 1918; First Attorney-General to become Member of Cabinet, 1912. *b* London, 10 Oct. 1860; 2nd *s.* of late Joseph H. Isaacs, merchant in City of London; *m.* 1887, Alice Edith, G.B.E., 3rd *d.* of late Albert Cohen, merchant, City of London: one *s. Educ.* University Collaege School; Brussels; Hanover. Bencher of Middle Temple, 1904; Solicitor-General, 1910; Attorney-General, 1910-13; K.C. 1898; M.P. (L.) Reading, 1904-13 *Heir: s.* Viscount Erleigh. *Address*: Simla or Delhi.

READYMONEY, SIR JEHANGHIER COWASJEE JEHANGHIER; *see* Jehanghier.

REED, SIR STANLEY, KT., K.B.E., LL.D. (Glasgow); Editor, *The Times of India*, Bombay, since 1907; *b.* Bristol, 1872; *m.* 1901, Lilian, *d.* of John Humphrey of Bombay. Joined staff, *Times of India*, 1897; Sp. Correspdt., *Times of India* and *Daily Chronicle* through famine districts of India, 1900; tour of Prince and Princess of Wales in India, 1905 06; Amir's visit to India, 1907, and Persian Gulf, 1907; Jt. Hon. Sec., Bombay Pres., King Edward and Lord Hardinge Memorials; Ex Lt.-Col. Commdg. Bombay L. H. Represented Western India at Imp. Press Confce., 1909. *Address: The Times of India*, Bombay.

REID, WILLIAM JAMES, C.S.I., Member and Vice-President, Executive Council, Assam. *b.* 1871. *Educ.* Glasgow H. S; Emmanuel Coll., Cambridge; Ent. I.C.S., 1891. *Address*: Shillong, Assam.

RICE, WALTER FRANCIS, C.S.I., Ch. Sec., Burma, since 1907; Mem. of Lt.-Gov.'s Council, since 1909; Add. Mem. of Imp. Council. *Educ.:* Morrison's Acad., Crieff; Balliol Coll., Oxford. Ent. I.C.S., 1890; Sec. to Govt., 1905. *Address*: Secretariat, Rangoon.

RIMINGTON, MAJOR-GENERAL JOSEPH CAMERON, C.B., 1916; C.S.I., 1918; R.E., Director, Military Works, from Feb. 1919 to July 1921. *b.* 20 Sept. 1864. Entd. army 1884; served Burma, 1886 (medal two clasps) European war (Mesopotamia), 1915-1916 (prom. Major-General despatches, C. B. & C.S.I.) *Address*: Messrs. Cox & Co., 16 Charing Cross, S. W, 1.

RIVINGTON, REV. CECIL STANSFELD; Kaiser-i-Hind Gold Medal (1918); Mission Priest in Diocese of Bombay; Supdt. of S.P.G. Missions in Canarese-speaking district of Bombay Diocese; Hon. Canon of St. Thomas Cathedral, Bombay; *b.* London, 1853. *Educ*: Rugby; Solicitors Examination, London; Cuddesdon College Priest, 1879. *Publications*: Commentaries on the Psalms, St. Luke and St. John, a Manual of Theology (all in Marathi). *Address*: Betgeri-Gadag, Dharwar District, Bombay.

ROBERTS, LT.-COL. SIR JAMES REID, KT., C.I.E., M.B., M.S., F.R.C.S. (Eng.), I.M.S. *b.* 24 Jan. 1861. *m. d.* of Col. W. P. Warburton, C.S.I., late Dir. Gen., I.M.S. *Educ.*: Dollar; Lausanne; Middlesex Hosp., London; Durham Coll. of Med. Ent. I.M.S., 1888. Agency Surgeon, Gilgit, 1890; Residency Surgeon, Indore, 1901-1912; Administrative Medical Officer for C.I., 1906-12; Surgeon to the Viceroy, 1912-16; served Chin-Lushai Expedition, 1889-90, Hunzanagar Expedition, 1891 (despatches, medal two clasps); Kt. of Grace, Order of St. John of Jerusalem; retired in 1919. *Address*. Wilderness Road, Malabar Hill, Bombay; or Messrs. King, King & Co., Bombay.

ROBINSON, SIR SYDNEY MADDOCK, KT., Chief Judge since 1920. *b.* 3 Dec. 1865. *Educ.* Hereford Cath. Sch.; Brasenose Coll., Oxford. Called to Bar, Middle Temple, 1888; Govt. Adv. and Leg Rem. to Punjab Govt. Puisne Judge, Ch Court of L. Burma, 1908-1920. *Address*: 1, Leeds Road, Rangoon.

ROBINSON, MAJ.-GEN. WILLIAM HENRY BANNER, C.B. (1915), K.H.S. (1919); Offg. Director-General, I.M.S., 1921; *b.* December 1863. *Educ.:* High School. Dublin; Carmichael Medical School, and R.C.S.I. *m.* Elsie, *d.* of the late W. D. Butcher, M.R.C.S.

Entered I.M.S., 1886. Residency Surgeon, Jaipur, Bikaner; C.M.O., Rajputana; I.G.C. Hospitals; Sanitary Commissioner, C. P.; served in Burma (1886); Chin Hills; Waziristan; Chitral; Tirah and with Indian Exped. Force in Egypt; Dy Dir., Med. Services, Egypt, 1914-17; Hon. Surgeon to the King; Surgeon-General, Bengal, 1918. *Address*: U.S. Club, Calcutta.

RONALDSHAY, EARL OF; LAWRENCE JOHN LUMLEY DUNDAS, G.C.I.E., Gov. of Bengal, since 1917; *e. surv. s.* of 1st Marquess of Zetland; *b.* 11 June 1876; *m.* 1907, Cicely, 2nd *d.* of Col. Mervyn Archdale, late 12th Lancers; one *s.* three *d.*; *Educ.*: Harrow; Trin. Coll., Camb. Travelled Ceylon, 1898; India, 1899-1900; Persia, 1900-01; Asiatic Turkey, Persia, Central Asia, Siberia, 1903; Japan, China, Burma, 1906-07; A.D.C., Viceroy's Staff, India, 1900; M.P. (U.) Hornsey Division, Middlesex, 1907-16. *Address*: Govt. House, Calcutta.

ROTHFELD, OTTO, I.C.S., B.A. (Oxon.), F.R.G.S.; Registrar of Co-operative Societies, Bombay, since Feb. 1920. *b.* 3 Oct. 1876. *m.* Frances Eleanor, *d.* of Sir Charles, Cameron, Bart., of Balclutha. *Educ.*: George Watsons' Coll., Edinburgh; Merton Coll., Oxford; 1st class Mods.; 1st class Lit. Hum. Came to India, 1899; Pol. Agent in Kathiawar, 1904; Collector of Broach, 1911-13, and subsequently Collector of East Khandesh, Sukkur and Surat. *Publications*: Indian Dust; Life and Its Puppets. With Pen and Rifle in Kistwar; Impressions of Co-operation in France and Italy; Women of India and Waq'aya. *Address*: North Yeravda, Poona.

ROUSE, ALEXANDER MACDONALD, C.I.E., Supdt. Works, Delhi; *b.* 14 Sep. 1878; *Educ.*: St. Paul's Sch.; R.I.E.C. Cooper's Hill. *Address*: Delhi.

ROW, RAO BAHADUR CONJEEVERAM KRISHNASWAMI, M.L.A. (nominated); District and Sessions Judge, Ramnad. *b.* 1867. *Educ.*; Presv. Coll., Madras. *m.* a grand-daughter of the late Raja Sir T. Madhava Row, K.C.S.I., I., Vakil, Madras High Court, 1889. Joined Provincial Judicial Service, 1894. *Address*: Kamalalaya, Mylapore, Madras.

ROW, DIWAN BAHADUR RAGHUNATHA ROW RAMACHANDRA; Secretary to Government of Madras. *b.* 27 September 1871. *Educ.*: Trivandrum and Presidency College, Madras. Statutory Civil Service, 1890-92. Transferred to Provincial Service. Collector, Registrar, Co-op. Credit Societies. *Address*: Madras.

ROY, RT. REV. AUGUSTIN; Bishop of Coimbatore, since 1904; *o.* France, 1863. *Address*: Catholic Cathedral, Coimbatore.

ROY, THE HON. RAJA PROMADA NATH; Member, Council of State and Zemindar of Bengal. *b.* 29 Jan. 1873. *Educ.* at Raj Shahye College and Presidency College; Member of the Imperial Legislative Council, 1910-12. *Address*: 163, Lower Circular Road, Calcutta

ROYAL-DAWSON, FREDERICK GEORGE, M.I.C.E., V.D.; Chief Engineer with the Railway Board, and Chairman, Indian Ry. Bridge Committee, January 1919 to March 1921. *b.* 1 June, 1867. *m.* Rose, *d.* of the late Major Lynch. *Educ.*: Elizabeth Coll., Guernsey and Cooper's Hill; Appointed Assistant Engineer, State Railways, 1889; Chief Engineer, N.W. Railway 1917; Senr. Government Inspector of Railways, Lucknow, June 1918, *Publications*: Technical papers including "Employment of Military Labour on the Agra-Delhi Chord" and "In-flow of water into Wells in the Punjab." "Train Resistances," etc. *Address*: c/o India Office, London.

RUNCHORELAL, SIR GIRJAPRASAD CHINUBHAI MADHAVLAL, 2nd Bt.; *b.* 19 Apr. 1906. *s.* of 1st Bt. and Sulochna, *d.* of Chunilal Khushalrai; *S.* father 1916. [Father was first member of Hindu community to receive baronetcy.] *Heir*: none. *Address*: Shahpur House, Ahmedabad.

RUSSELL, CHARLES LENNOX SOMERVILLE; *b.* 10 July 1872. *Educ.*: Rugby; St. John's Coll., Camb.; Ent. I. C. S., 1893; travelled through Baluchistan, Persia, and Central Asia, overland to Europe; Sp. duty in For. Dept. of Govt. of India, 1908-1909; Resident at Indore, 1909-1912. and again 1913-15 Resident, Baroda.

RUTHVEN, 9TH BARON, BRIG.-GEN. WALTER PATRICK HORE-RUTHVEN, C.B. (1919); C.M.G. (1915); D.S.O. (1900); G.O.C., Bangalore Brigade; *b.* London, 6 June 1870; *e s.* of 8th Baron Ruthven and Lady Caroline Gore, *d.* of 4th Earl of Arran; *m.* Jean Leslie, *o.d.* of late Norman Lampson of The Farm House, Pont Street, S.W. *Educ.*: Eton. Served South Africa, 1899-1901 (despatches, thrice, Queens; medal with King's medal with 9 clasps); European War, 1914-18 (despatches seven times, C.B., C.M.G., prom. Colonel). *Address*: Bangalore.

RUTLAM, Col. H. H. SIR SAJJAN SINGHJI, K.C.S.I. Maharaja Sahib Bahadur of Rutlam. *b.* 13 Jan. 1880; *S.* father (Sir Ranjit Singhji, K.C.I.E.), 1893; *m.* 1902, *d.* of H. H. Rao of Kutch. State has area of 871 sq. miles and population of 85,496; salute of 13 guns; (local 15); descended from younger branch of Jodhpur family, and maintains moral supremacy over Rajput chiefs in Malwa; served European War (France) 1915 and 1916. *Address*: The Palace, Rutlam.

SABNIS, RAO BAHADUR R. V., B.A., C.I.E.; Diwan, Kolhapur State, since 1908; *b.* 1 April 1857. *Educ.*: Rajaram H. S., Kolhapur; Elphinstone Coll., Bombay. Ent. Educ. Dept; held offices of Huzur Chitnis and Ch. Rev. Officer, Kolhapur; Mem. of Royal Soc. of Arts, East India Assoc.; Roy. Asiatic Soc., Bombay Br. *Address*: Kolhapur.

SACHIN, NAWAB SEEDEE IBRAHIM MOHOMMED YAKUT KHAN-MUBARZARUT DAWLA NASRAT JUNG BAHADUR, NAWAB OF; A.D.C.; *b.* 1886, and succeeded as an infant in following year. Installed May 1907; Hon. Captain, 1909. Major, 1921. State has area of 49 sq. miles, and population of 60,000; salute of 9 guns

Educ.: Rajkumar Coll., Rajkote; Mayo Coll., Ajmere; Imp. Cadet Corps. Served G.E.A. in 1914-15. *Address:* Sachin, Surat.

SAGRADA, Rt. Rev. Emmanuel; Vicar Apostolic of Eastern Burma and Titular Bishop of Trina, since 1909. *b.* Lodi, 1860. *Address:* Toungoo, Burma

SAILANA, His Highness Raja Saheb Dileep Singhji Bahadur of, *b.* 18 March 1891; succeeded the Gadi, 14 July 1919. *m.* first to the daughter of H. H. the Maharawat of Partabgarh and after her death to the daughter of the Rao of Meja in Udaipur *Educ.:* Mayo College, Ajmer, salute 11 guns Gave contribution of Rs. 60,000 to British War expenses and various funds pertaining to War. *Address:* Sailana, C. I.

ST. JOHN, Lt.-Colonel Henry Beauchamp, C.I.E.; C.B.E.; Resident, Western Rajputana States. *b.* 26 Aug. 1874. *Educ.:* Sandhurst. Ent. Army, 1893. *Address:* The Residency, Jodhpur.

SAMS, Hubert Arthur, C.I.E. (1919). Postmaster-General, Bombay Circle, since April 1920. *b.* 3 May 1875. *m.* Millicent Helen Langford. *Educ.:* St. Paul's School, Peterhouse, Cambridge, B.A. (1897). Entered I.C.S., 1898 Punjab Commission, 1899-1907; P.M.G., 1907; Director of Postal Services, M.E.F., 1917-19; Temp. Lt.-Col., R.E., Aug. 1917—May 1919. Three times mentioned in despatches. *Address:* Byculla Club, Bombay.

SAMTHAR, H. H. Maharaja Sir Bir Singh Deo, Maharaja of, K.C.I.E.; *b.* 8 Nov. 1865; *S.* 1896. *Address:* Samthar Bundelkhand.

SANDBROOK, John Arthur; Editor of *The Englishman*, Calcutta, since 1910; *b.* 3 May 1876. *Educ.:* Swansea G. S. Ent. Journalism, 1892; Ch. Asst. Editor, *Western Mail*, Cardiff, 1902-10; served in S. African War. *Address:* 9, Hare Street, Calcutta.

SANDERSON, Sir Lancelot, Kt., K.C.; Ch. Justice of Bengal, since 1915; *b.* 24 Oct. 1863. *Educ.:* Elstree; Harrow; Trin. Coll., Camb. Called to Bar, Inner Temple, 1886; M.P. (U.) Appleby Div., Westmorland, 1910-15; Recorder of Wigan. 1901-15. *Address:* 7, Middleton Street, Calcutta.

SANJANA, Shams-ul-Ulema Dastur Darab Peshotan, B.A., J.P. Senior Head Priest of the Parsis, Bombay; *b.* 18 November 1857. *m.* Shirinbai Rustomji B. Badshah *Educ.:* Elphinstone High School, Proprietary School, and Elphinstone College, Hon Fellow and Examiner in Avesta and Pahlav University of Bombay, 1887; Principal, Sir Jamsetji Zarthosti Madressa; Editor and translator, "Pahlavi Dinkard," of which Vol. 17 is now in the press. Has preached a number of religious sermons and published many English and Gujarati books on Parsi history and religion. *Address:* 85, Cumballa Hill, Bombay.

SANKARAN NAIR, Sir Chettur, Kt. *cr.* 1912; C.I.E., 1904; B.A., B.L., *b.* 11 July 1857. *Educ.:* Madras Presidency College. High Court Vakil; Govt. Pleader and Pub. Prosecutor to the Govt of Madras; Advocate-General for some time acting, then permanent Judge, High Court, Madras; for many years a member of Madras Legis. Council; President of the Indian National Congress at Amraoti; President of the Indian Social Conference at Madras; President of the Indian Industrial Exhibition, Madras; Founder and for some time Editor, Madras Review and Madras Law Journal: Member of Governor-General's Executive Council in India, 1915-1919; Mem. of Council of the Secretary of State for India, 1919-1921. *Address:* The India Office, Whitehall, London.

SAO, Sir Moung, K.C.I.E., C.I.E., Sawbwa of Yawng Hwe, Burma; Mem. of Imp. Leg. Council. *Address:* Yawng Hwe, Shan States, Burma.

SARDAR GHOUS BAKSH KHAN RAISANI Sir, K.C.I.E., premier Chief of Sarawans, Baluchistan.

SARMA, The Hon. Rao Bahadur B. Narasimheswara, Member of Governor-General's Executive Council (for Rev, Agri. and P.W. Depts.). *b.* Jan. 1867. *Educ.* Hindu Coll., Vizagapatam; Rajamundry Coll. and Presy. Coll., Madras. Subsequently teacher, Professor, and at the bar in Vizagapatam and Madras. *Address:* Simla.

SARVADHIKARY, Sir Deva Prasad, Kt., C.I.E.; M A, B L. (Calcutta), LL.D. (Aberdeen), LL.D. (St. Andrews), Suriratna (Navadwip), Vidyaratnakar (Dacca) Vidya Sudhakar (Bhatparag), late Vice-Chan., Calcutta Univ.; Mem. of Indian Legislative Assembly. *b.* 1861 *m.* 1883 Nagendranandini, 2 *s.* and 3 *d. Educ:* Rameshwarpore, Sanskrit College, Presidency College; Calcutta. For several years Mem. of Mun Corpn. of Calcutta; Mem. of Imp. Lib. Comm.; Trustee, Imp. Museum; Pres., various literary societies; Mem., B. I. Assoc.; Vice-President, Sahitya Parishat, *Address:* Prasadpur 20, Suri Lane, Calcutta.

SASTRI, Calamur Veeravalli Kumarasami, *b.* July 1870. *Educ.;* Presy. and Law Colls., Madras. B.A (1890); B.L. (1893); Vakil, 1894; Judge, Small Causes Court, 1905-06; Judge, Madras City Court, 1906-12; District and Sessions Judge, Ganjam, 1912-14; Member of the Rowlat Committee, 1918; Chairman, Labour Committee, 1920 Judge, Madras High Court, 1914-20, member, Criminal Procedure Code Committee, 1917. *Address;* Kalamur House, Madras, N.E.

SCOTT, Maj-Gen. Thomas Edwin, C.B. (1917), D.S.O. (1897), C.I.E. (1900), G.O.C. and Political Resident, Aden, since 1920. *b.* 6 March 1867. *m.* Renira Josephine, *d.* of the late Rev. E. M. Chaplin. Entered Army 1888. Served N. W. frontier, 1891; Waziristan field force; 1894-95; East Africa, 1895-96; Uganda, 1897-98. China, 1900; Mesopotamia and East Africa; Military Sec. to the C-in-C. in India (General Sir; Charles Monro); G. O. C., Bangalore Bde., 1919-20. *Address:* Aden.

SEAL, BRAJENDRANATH, M.D., Ph.D.; George V., Prof. of Mental and Moral Science, Calcutta Univ., since 1914; *b.* 3 Sep. 1864. *Educ.:* Gen. Asst. Coll.; (Ch. of Scotland) Calcutta Univ.; Del., Orientalist Congress, Rome, 1899; opened discussion at 1st Univ. Races Congress, London, 1911; Mem. Simla, Committee for drawing up Calcutta Univ. Reg., 1905. *Address:* 25, Rammohon Shaw Lane, Duff Street, Calcutta.

SEDDON, CHARLES NORMAN, I.C.S. (retired), *b.* 18 Dec. 1870. *Educ.;* Liverpool College and Balliol College, Oxford, *m.* Helena, *d.* of the late J. F. Braga. Service in I.C.S., in Bombay; Presidency. Special Famine Officer in Kathiawar in 1900. Administarator, Nawanagar State; First Assist. Resident, Baroda; Settlement Commr. Amatya and offg. Dewan of Baroda, Settlement Commissioner, Bombay, Commr., Central Division, Bombay for some years Presdt., Civil and Military Exam. Comttee., Bombay, Reforms Commissioner and temporary member of Bombay Executive Council, 1920; Member of the Council of State, Feb. 1921; Revenue Minister, Baroda, October 1921. *Address;* Baroda.

SELL, REV. CANON E., B.D., (Lambeth), D. D., (Edin.); Fellow, Madras Univ., Ch. Financial Adviser M. Soc., Madras, *b.* 1839, *Educ.:* C.M.S. Coll. London. Arr. in India, 1865; Numerous publications on the history of Islam. *Address:* Vepery, Madras.

SEN, JITENDRANATH, M.A.; Calcutta Univ. Sen. Prof. of Phy. Sc., City Coll., since 1903; *b* 1875 *m.* 1899, *Educ.* Hindu Sch.; Presidency Col.; City Coll. and Sc. Assoc., Calcutta, *Publications:* Elementary Wave Theory of Light and other small books. *Address;* 25 or 1, Muddun Mohun Sen's Street, Calcutta.

SETALVAD, RAO BAHADUR CHUNILAL HARILAL, C.I.E., Bar-at-Law, Ag. Chief Presidency Magistrate Bombay, *Address*. Bombay.

SETHNA, THE HON. MR. PHIROZE CURSETJEE, B.A., J.P., O.B.E., (1918); Member, the Council of State, *b.* 8 Oct. 1866. Manager, Sun Life Assurance Co., of Canada. *Address;* Canada Building, Hornby Road, Bombay.

SHADI, LAL, SIR, M.A. (Punjab), 1895, B.A, Honours (Oxford) 1898; B.C.L. Hon. (Oxford), 1899; Boden Sanskrit Scholar, (Oxford), 1896; Arden Law Scholar (Gray's Inn.), 1899; Honoursman of Council of Legal Education, 1899; Special Prizeman in Constitutional Law, 1899; Chief Justice High Court, Lahore. *b.* May 1874; *Educ.* at Govt. Coll., Lahore, Balliol Coll., Oxford. Practised at the Bar 1899-1913; Offg. Judge, Punjab Chief Court, 1913 and 1914; Permanent Judge 1917; Judge, High Court, Lahore, 1919; Chief Justice, May 1920. Elected by Punjab Univ to the Leg. Council in 1910 and 1913. Fellow and Syndic, Punjab University. *Publication:* Lectures on Private International Law, Commentaries on the Punjab Alienation of Land Act and Punjab Preemption Act, etc. *Address;* Lahore.

SHAFI, THE HON. SIR MIAN MUHAMMAD, K.C.S.I. (1922); C. I. E. Education Member, Govt. of India (1919), *b.* 10 March, 1869. *Educ.:* Government College and Forman Christian College, Lahore, Scholar and Barrister (Middle Temple); President, All India Muslim League, 1913; Trustee, M.A.O. College, Aligarh; President, All-India Mahomedan Educational Conference, 1916; President, High Court Bar Association, 1917-1919; President, Punjab Prov. Bar Confce., 1919; Member, Punjab Legislative Council, and Imperial Legislative Council from 1909-1919. *Publications:* "Punjab Tenancy Act with notes;" "Provincial Small Cause Courts Act with notes;" and "Law of Compensation for Improvements in British India. *Address:* Simla or Delhi.

SHAH, HON. SIR LALLUBHAI ASHARAM, KT, (1920), M.A., LL.B.; Judge of High Court, Bombay, since 1913; *b.* 1873; *Educ.*, Gujerat Coll., Ahmedabad; Govt., Law Sch. Bombay. *Address:* Cumballa Hill, Bombay.

SHAHPURA, RAJA SIR NAHAR SINGH DHIRAJ, K.C.I.E.; *b.* 7 Nov. 1855; *S.* Shahpura Gaddi by right of inheritance, 1870. *Address:* Shahpura, Rajputana.

SHAKESPEAR, ALEXANDER BLAKE, C.I.E.; Merchant; partner in firm of Begg, Sutherland & Co.; *b.* 1873. *Educ.:* Berkhampstead. Was Sec., Upper India Chamber of Commerce, 1905-12. *Address:* Cawnpore.

SHAMSHER SINGH, SIR SARDAR, SARDAR BAHADUR, K.C.I.E., C.I.E.; Ch. Min., Jind State; *b.* 1860. *Educ.:* Jullundur and Hoshiarpur H. S. and Govt. Coll., Lahore. Served during Afghan War, 1879-80, with march from Kabul to Kandahar; Ch. Jud. of State, High Court, 1899-1903. *Address:* Sangrur Jind State.

SHAMS-UL-HUDA, THE HON. MR. JUSTICE (NAWAB SIR SYED) K.C.I.E., M.A., B.L.; Judge, Calcutta High Court, since 1917; *b.* 1864; belongs to well-known family of Syeds in Tippera, East Bengal; *Educ.:* Presidency Coll., Calcutta; Calcutta Univ. Commenced practice as Vakil in High Court at Calcutta; Mem., Bengal Exec. Council, 1912-17; Vice-Pres., Bengal Exec. Council, April-June 1917. held office of Sec. of Bengal Prov. Moslem League and that of Bengal Landholders Assoc. Pres., All-India Moslem League, 1912. *Address:* 220-2, Lower Circular Road, Calcutta.

SHARFUDDIN, HON. MR. JUSTICE SYED; *ex.* Judge of Patna High Court; Mem. of Exec. Council, Lt.-Gov. of Behar, since 1917; *b.* Neora, 10 Sept. 1856; *Educ.:* Patna Coll. Called to Bar. 1880; Puisne Judge, Calcutta, 1907-15; Mem. of Senate of Calcutta Univ., 1904; Bengal Council, 1905; Pres. of All India Md. Educ. Confce., 1906. *Address:* High Court, Patna.

SHARP, HENRY, C.S.I., C.I.E., Kt. of Grace, Order of St. John of Jerusalem. M.A., Secretary to the Govt. of India, Education Dept.; Mem., Imp. Council, since 1911, and now Member, Legislative Assembly; *b.* 1 June 1869; *Educ.:* Rugby; New Coll., Oxford. I.E.S. 1894, in C. P., Dir. of Pub. Inst., E.B. and Assam, 1906-10; *Publications:* "Rural schools in the C. P." "Progress of education in India, 1907-12, sixth quinquennial

review." ditto, seventh quinquennial review, 1912-1917. "Delhi, Its Story and Buildings," 1921. *Address:* Simla and Delhi.

SHASTRI, PRABHU DUTT, Ph.D. (Kiel), B. Sc. Litt. Hum. (Oxon.), M.A. B.T., Hon. M.O.L. (Punjab); I.E.S.; Sen. Prof. of Mental and Moral Phil. in Presidency Coll., Calcutta, since 1912; *b.* 20 June 1885; *Educ.:* Universities of Lahore, Oxford, Kiel, Bonn and Paris. Del. to and Sectional Pres. at 4th Int. Congress of Philosophy held at Bologna, 1911: Head of Dept. of Philosophy, since 1912, Calcutta Univ. Lect. in Phil. and Sanskrit, 1912-15; invited to lecture in Universities of Geneva, Florence and Rome, 1913-14. *Publications:* several works and articles on philosophical, educational, literary, religious and social subjects. *Address.* Presidency College, Calcutta; Bellevue, Lahore.

SHEA, LIEUT.-GENERAL, SIR JOHN STUART MACKENZIE, K.C.M.G. (1919); C.B. (1915); C.M.G. (1918); D.S.O. (1901); G.O.C. Central Provinces District; *b.* 17 Jan. 1869; *m.* 1902, Winifred Mary; *d.* of late William Congreve of Burton and Congreve. *Educ.:* Sedbergh; Sandhurst. 2nd-Lt., The Royal Irish Regt. 1888; Lt., 15th Lancers, 1891; 35th Scinde Horse, 1912 Served Chitral Relief Force, 1895 (medal with clasp); South Africa, 1900-1902; Queen's medal 4 clasps, King's medal 2 clasps, despatches, D.S.O., Brevet of Major, qualified for Staff Brevet Lt.-Col. 1912, European War, 1914-18 (despatches C.B., Bt. Col. C.M.G., K.C.M.G.,) Promoted Maj. Gen., for services in field 1917; Commander Legion d' Honneur Order of Nile, 2nd class. *Address:* Mhow.

SHIVAVANDAN PRASAD SINGH, The Hon. Raja, O.B.E., Landholder. *b.* 1873. *Educ.:* Monghyr Zilla School and Presidency College, Calcutta. Chairman, Monghyr Municipality for 20 years; now non-official Chairman; Nom. Member of Bengal Reformed Council; Elected Member, Bihar and Orissa Legislative Council; Sec. Diamond Jubilee Coll., Monghyr and Hon. Magistrate sitting singly with First Class powers and Member, Indian Legislative Assembly as a representative of the Landholders of the Province of Bihar and Orissa.

SIDGWICK, CHARLES KATER DURY, D.S.O.; Dist. Loco. and Carr. and Wag. Supdt., B. B. & C. I. Ry.; *b.* 12 July 1873; *Educ.:* Rottingdean: Winchester. Served apprenticeship, L. and N. W. R. Co. at Crewe, 1892-95, served Boer War (D.S.O.); *Address:* B. B. & C. I. Railway, Bombay.

SIFTON, JAMES DAVID, C.I.E., (1921); I.C.S. *b.* 17 April 1878. *Educ.:* St. Paul's School and Magdalen Coll., Oxford. *m.* Harriette May Shettle of Eye, Suffolk. Joined I.C.S., 1901. Served in Bengal to 1910. Transferred to Bihar and Orissa. Sec. to Govt. in Financial and Municipal Dept., 1917. *Address:* Patna, Bihar and Orissa.

SIKKIM, MAHARAJA OF, H. H. MAHARAJA TRASHI NAMGYAL, C.I.E. *b.* 26 Oct. 1893; *s.* of late Maharaja Sir Thotub Ramgyal, K.C.I.E., of Sikkim. *Educ.:* Mayo Coll., Ajmer; St. Paul's Sch., Darjeeling. *Address:* The Palace, Gangtok, Sikkim.

SIMLA, ARCHBISHOP OF, since 1911, MOST REV. ANSELM, E. J. KENEALY; *b.* 1864. Ent. Franciscan Order, 1879; Priest, 1887; Guardian of Franciscans, Crawley, Sussex, 1899; Minister, Provincial for England, 1902; first Rector of the Franciscan College, Cowley, Oxford, 1906; elected life member of Oxford Union, 1907; Definitor-General representing English-speaking provinces: Visitator-General, Irish Province, 1910. *Address:* Archbishop's House, Simla E.

SIMONSEN, JOHN LIONEL, F.I.C.; D.Sc. (Manch.), F.A.S.B., Prof. of Chem. Presidency Coll., Madras, 1910-18; Dy. Controller, Ind. Mun. Board, 1918-19; Forest Chemist. 1919; *b.* 22 Jan 1884; *m.* 1913 Jannet Dick Hendrie *M.B.*, Ch. B., L.M. *Educ.:* Manchester G. S. and Univ.; Pres. Chem. Section Ind. Sc. Congress, 1917. *Publications:* Numerous papers on the transactions of Chemical Society of London *Address:* Forest Research Institute, Dehra Dun.

SIMPSON, SIR CLEMENT BELL, KT.; Manager of Binny & Co, Madras; *b.* Madras, 25 July 1866; *Educ.:* Lockers Park; Rugby. Went to Binny & Co., Madras, 1886; partner, 1890; Mem., Madras Chamber of Commerce; sometime Trustee of Madras Port Trust; Director, Bank of Madras, and Director of local Cotton Manufacturing Companies. *Address:* c/o Binny & Co., Madras.

SINGH, LT.-COL. BAWA JIWAN, C.I.E. (1918); Director, Medical and Sanitation Departments H. E. H. The Nizam's Government, Hyderabad. *b.* 6 May 1863. *Educ.:* Government and Medical Colleges, Lahore and St. Thomas' Hospital Medical School, London. Joined I.M.S 1891 Served in Military Department to 1896 Civil Surgeon, Meiktila, 1896. Secretary, I.G. Prisons, with Civil Medical Administration, Burma, 1897-1899; Supdt., Central Jail Insein, Burma from 1899 to 1909; Inspector-Genl. of Prisons, E. Bengal and Assam, 1910-1912; Inspector-Genl. of Prisons, Behar and Orissa from 1912-1920. *Address;* Hyderabad.

SINGH, THE HON. SIRDAR JOGENDRA, Member of Council of State. Talukdar, Aira Estate, Kheri District, *b.* 25 May 1877. Has contributed to several papers in India. Has been Home Minister, Patiala State. Fellow of the Punjab Univ. Presdt of Sikh Educ. confce. served on Indian Sugar Comttee. Editor of *East and West. Publications:* Nurjehan; Nasrin. Life of B. M. Malabari. *Address.* Aira Holme, Simla (East)

SINGH, KUNWAR MAHARAJ, C.I.E., Dy. Secry. to Govt. of India, Education Department, 1920. *b.* 17 May 1878 *Educ.:* Harrow; Ball Coll., Oxford; Bar-at-law, Middle Temple. 1902. Ent. Prov. C. S. U. P. as Dty Coll. 1904 Sen Asst Sec. to Govt. of India, Dept. of Education, 1915, Mag. and Coll. of Hamirpur U. P., 1917. Dy. Comr. of Hardoi U. P. 1918; Secry. to U. P. Govt., 1919,

SINGH, THE HON. LALA SUKHBIR, Landholder and Jagirdar. *b.* 5 Jan. 1868. *Educ.* Agra College. Member, U. P. Legislative Council, from 1909-1920 when elected to the Council of State from the four Northern

Divisions of the Agra Province. *Publications*: Translation of the "Gita" in Hindi. *Address*: Muzaffarnagar, U. P.

SINGH, SIR RAMESHAR, G.C.I.E., K.B.E. Maharajadhiraja of Darbhanga; Mem. Exec. Council, Bihar and Orissa, since 1912; Mem. of Imp. Council 1899-1900; *b.* 16 Jan. 1860 twice married; two *s.* oned *d. b.* Maharaja Bahadur Sir Lakshmeshwar Singh, G.C.I.E. made hereditary Maharaja Bahadur, 1907; hereditary Maharajadhiraja, 1920; *Educ.* Queen's Coll. Benares; privately; Life-Pres., Behar Landholders Assoc. Maithel Mahasabha. Bharat Dharma Mahamandal and also Pres., Hindu Univ. Soc., Behar Panchayat Assoc.,etc. A member of the Indian Police Commission and of Indian Famine Trust; Pres., Prince of Wales Reception Committee for Bengal, 1905; Indian Industrial Conference, 1908; Religious Convention held at Calcutta, 1910 and Allahabad 1911; All India Hindu Conference, April 1915, All India Landholders' Assocn. and Bengal Landholders' Assocn; Member, Council of State since 1920. *Address*: Darbhanga and Ranchi.

SINGH, COL. MAHARAJ, SRI SIR BHAIRUN BAHADUR, K.C.S.I., A.D.C.; Vice-Pres. of State Council; *b.* 1879; *s.* of Maharaj Sri Khet Singhji and *c.* of Maharajah of Bikaner. *Educ.*; Mayo Coll., Ajmer. *Address*; Bikaner.

SINGH PRINCE VICTOR D. *see* Duleep Singh.

SINHA, BEOHAR RAGHUBIR, Member, Legislative Assembly; Zamindar and Jagirdar. *Educ.* Government College, Jubbulpore. Hon. Magte., 2nd Class; has been member of the C. P. Council on behalf of Zamindars; elected Member, Legislative Assembly on behalf of C. P. Zamindars. *Publications*: Hindi Shastra Siddhanta Sar. *Address*: Jubbulpore.

SINHA, NARENDRA PRASANNA; Major, I.M.S., retired; Consulting Physician; Mem., Advisory Council, India Office; *b.* 20 Sept. 1858. *Educ.*: Calcutta; Univ. Coll., London. Ent. I.M.S., 1886; retired 1905.

SINHA, THE HON. MR. SACHCHIDANANDA, Barrister, Member, Executive Council, Bihar and Orissa, 1921; also Presidt of Legislative Council. *b.* 10 November 1871. *m.* the late Srimati Radhika, *d.* of the late Mr. Sewa Ram, of Lahore. *Educ.*: Patna College and City College, Calcutta. Called to the Bari (Middle Temple), 1893; Advocate, Calcutta High Court, 1893; Allahabad High Court, 1896; Patna High Court, 1916. Founded and since edited *The Hindustan Review*, 1899 Twice Elected Member, Imperial Legislative Council, Elected Legislative Assembly, 1920, also elected its first Deputy President, Feb 1921. *Publication*: "The Partition of Bengal or the Separation of Behar." *Address*: Patna, Behar and 7, Elgin Road, Allahabad.

SINHA, SATYENDRA PRASSANA, FIRST BARON, P.C., K.C.; Governor of Behar and Orissa, raised to Peerage (1st Indian), K.C.S.I. (1921); *b.* 1864; *Educ.*: Birbhoom Zilla Sch.; Presidency Coll., Calcutta; Lincoln's Inn; called to Bar, 1886; Barrister, Calcutta H. C.; Standing Counsel, Govt. of India, 1903; Adv. Gen., Bengal, 1907-9 and 1916-17; Law Member, Viceroy's Executive Council 1909-10; Member, Bengal Executive Council, 1917-18; Representative of India in Imp. War Confce. 1917 and in 1918; Freeman of City of London, 1917; App. Representative of India at Peace Conference; Under Secretary of State for India, 1919-20. *Address*: Patna and Ranchi.

SIRMUR, HIS HIGHNESS RAJA AMAR PARKASH BAHADUR, Chief of; K.C.S.I. *Address*: Sirmur, Nahan.

SIROHI, H. H. MAHARAJA DHIRAJ, MAHARAO SARUP RAM SINGH BAHADUR. *b.* Sept. 27, 1888. S. April 29, 1920. *Address*: Sirohi, Rajputana.

SITAMAU, H. H. SIR RAJA RAM SINGH, RAJA OF, K.C.I.E.; *b* 1880; descended from Rathor House of Kachi Baroda. *Educ.*: Daly Coll., Indore. Hindi and Sanskrit poet, and keen student of science and ancient and modern philosophy. *S.* by selection by Govt. of India in default of direct issue, 1900. *Address*: Ramniwas Palace, Sitamau, C. I.

SKEEN, MAJOR-GENERAL ANDREW, C.M.G. 1916; G.O.C., Kohat District; *b.* 1873. Served N. W. Frontier, India, 1897-98 (medal, 2 clasps); China, 1900 (medal); East Africa, 1902-4 (despatches, Bt.-Major, medal, 2 clasps); European War, 1914-18 (despatches, Bt.-Col. C.M.G.) 3rd Afghan War, 1919. Despatches; Waziristan operations, 1919-1920. *Address*: Kohat.

SLOCOCK, FRANCIS SAMUEL ALFRED C.I.E., *Educ.*: Marlborough; Trinity Coll., Oxford. Ent I.C.S., 1889; served Madras and C.P., Ch. Sec. Ch. to Commsr. 1906; Inspr.-Genl. of Police, C. P., 1908-14 Sp. duty, Govt. of India, Home Dept., 1914-16; Ch. Sec. to Ch. Commsr., C. P. and Addl. Mem., Imp. Leg. Council. *Address*: Nagpur.

SLY, SIR FRANK GEORGE, K. C. S. I.; Governor of the Central Provinces and Berar. *Educ.*: Balliol Coll., Oxford. Ent. I.C.S., 1885; Insp.-Gen. of Agric., 1904-05; Mem. of Roy. Commsn. on Indian Services, 1912; Mem. of Franchise Committee (Reforms Scheme) 1918-19; Chief Commissioner, Central Provinces and Behar, 1920. *Address*: Nagpur.

SMITH, REV. GEORGE HERBERT, M.A. (Oxon); Prin. of S.P.G. Theological Coll., Madras; Sec. of Madras Diocesan Committee of S.P.G., since 1901; Hon. Canon of St. George's Cathedral, Madras, since 1910; Incumbent of St. Thomas' Church, San Thome, Madras; *b.* 31 Aug. 1851; *Educ.*: Richmond Sch., Yorks; Queen's Coll., Oxford. *Address*: Sullivan's Gardens, Royapettah, Madras.

SMITH, HENRY MONCRIEFF, C.I.E. (1920). Sec. to Govt. of India, Leg. Dept. since 1921. *b* Dec. 23, 1873. *Educ.*: Blundell's School, Tiverton, Sidney, Sussex Coll., Cambridge. I.C.S., 1897. Assist. Commr. in U. P. Dist and Sessions Judge, 1908; Addl. Sec. to U. P. Govt. 1914. Dy. Sec. to Govt. of India 1915. Joint Sec., 1919. *Address*: Simla or Delhi.

SMITH, SIR THOMAS, KT. (1921), V. D. (1914), Chevalier of the Order of the Crown (Belgium). Managing Director, Muir Mills Co., Ltd., Cawnpore. *b.* 28 Aug. 1875. *m.* Elsie Maud. *d.* of Sir Henry Ledgard in 1907; 2*s.* 1 *d.* Member of

the Hunter Committee on Punjab Disorders, 1919. Presdt Upper India Chamber of Commerce; Member, U. P. Leg. Council, 1918-21. Fellow of Allahabad University, 1913-21 Commandant, 16th Cawnpore Rifles, 1913-20. *Address*: Westfield, Cawnpore.

SORABJI, CORNELIA; Kaiser-i-Hind Gold 1st class medal (1909). Legal Adviser to Purdahnishins, Court of Wards, Bengal, Behar and Orissa, and Assam, and Consulting Counsel. *Educ.*: Somerville Coll., Oxford, Lee and Pembertons, Lincon's Inn Fields, London; Bachelor of Civil Law, Examination Oxford, 1893; obtained special privileges, Lincoln's Inn, London, 1903; propounded in 1902 scheme, to India Office, for connecting Woman Counsel with Prov. Exec. Govts. of India; in 1904 app. by Govt. of Bengal to position she now holds. *Publications*: *Sun-Babies* (1904); *Between the Twilights* (1908), *The Purdanashin* (1916); Sun-Babies (2nd Series Illustrated) 1920; contributions to the *Nineteenth Century*, *Westminster Gazette*, *The Times* and other newspapers and Magazines. *Address*: Board of Revenue, Calcutta.

SPENCER, HON. MR. JUSTICE CHARLES GORDON, I.C.S.; Puisne Judge of Madras High Court, since 1914; *b.* 23 Feb. 1869. *Educ.*: Marlborough; Keble Coll., Oxford; Lincoln's Inn. Ent. I.C.S., 1888; *Address*: Weston, Haddows Road, Nungumbaukum, Madras.

SPRING, HON. SIR FRANCIS JOSEPH EDWARD, K.C.I.E., C.I.E.; Mem., Madras Council, M.A.I., *honoris causa* and L.C.E. Trinity Coll., Dublin; late Mem. of Council of Inst. of Civil. Engrs.; is Mem. of Inst. of Mech. Engrs.; and of American Soc. C.E.; Chairman and Ch. Eng. of Madras Port Trust; Consult. Eng. to Port of Chittagong; *b.* 20 Jan. 1849. *Educ.*: Middleton Sch. Co. Cork; Trinity Coll., Dublin. Ent. Ind. Govt. Eng. Service, 1870. *Publications*: has written on technical education, on light railways of local interest, and on the training and control of great rivers. *Address*: Madras.

STANDEN, BERTRAM PRIOR, C.S.I. (1920); C.I.E., Commsr., Bihar Div., C.P. since 1915; *b.* 1867. *Educ.*: Uppingham, Trinity Coll., Camb. Ent. I.C.S., 1886, Ch. Sec. to Ch. Commissioner 1908-11; Member, Prov. Leg. Council. *Address*: Amraoti.

STEIN, SIR AUREL, K.C.I.E., Ph.D., D. Litt. (Hon. Oxon.) D. Sc. (Hon. Camb.) D. O.L. (Hon. Punjab); Gold Medallist, R. Geo. Soc. etc.; Indian Archæolgical Survey Officer on special duty; *b.* Budapest, 26 Nov. 1862. *Educ.*: Budapest and Dresden; studied Oriental Languages and Antiquities at Vienna and Tübingen Universities and in England. App. to I. E. S. as Prin. of Calcutta Madrasah, 1899. Inspector-General of Education N. W. F. P. and Baluchistan, 1904. Carried out archæological explorations for Indian Govt in Chinese Turkestan 1900-01 and in C. Asia and W. China 1906-08; transferred to Archæological Survey 1909; carried out geographical and archæological explorations in C. Asia and Persia 1913-16. *Publications*; Kalhana's *Chronicle of Kings of Kashmir* Sanscrit text 1892 trans. with commentary. 2 Vols., 1900; *Sand-buried ruins of Khotan* 1903; *Ancient Khotan* 1908 (2 Vols.); *Ruins of Desert Cathay* 1912 (2 vols.); *Serindia* 1921 (5 vols.) and numerous papers on Indian and Central Asian Archæology and Geography. *Address*, Srinagar.

STEPHENSON, HUGH LANSDOWN, C.S.I., C.I.E. I.C.S.; *b.* London, 8 Apr. 1871. *Educ.*: Westminster; Christ Church, Oxford. Ent. I.C.S., 1895; Sec. to Board of Rev., Calcutta Fin. Sec. to Govt. of Bengal.; Addl. Sec., Pol. Dept.; Member of Southborough Reforms Committee; Chief Secretary to Government of Bengal, Dec. 1919. *Address*: Writers' Buildings, Calcutta.

STEVENS, LT.-COL. CECIL ROBERT, I.M.S., M.D., B.S., Lond., F.R.C.S., Eng.; Prof of Clinical and Operative Surgery, Medical Coll., Calcutta; *b.* 14 Mar. 1867. *Educ.*: Malvern; Univ. Coll., London; St. Bartholomew's. *Address*: 5, Middleton Street, Calcutta.

STEVENSON-MOORE, SIR CHARLES JAMES, K.C.I.E. (1920); C.V.O., I.C.S.; Member, Bengal Executive Council (tempy.) *b.* 1866. *Educ.*: Felsted Sch., Essex; Emmanuel Coll., Camb. Joined I.C.S., 1885; Ch. Sec., Govt. of Bengal, 1910; Member, Prov Leg. Council, since 1910; Member, Board of Revenue, Bengal, 1914-20.

STEWART, ALEXANDER CARMICHAEL, M.V.O., Insp. Gen., Police, Punjab, since 1918. *Educ.*: privately. *Address*: Simla and Lahore.

STEWART, SIR FRANCIS HUGH, KT., C.I.E., M.A. (Oxon.); partner in Gladstone, Wyllie and Company, Merchants, London and Calcutta; *b.* Nov. 1869. *Educ.*: Harrow; Magdalen Coll., Oxford. Amateur Golf Champion of India, 1897; Pres., Bengal Chamber of Commerce, 1915-16; Mem of Bengal Council, 1911-12, 1914; Imp. Council, 1915; Sheriff of Calcutta, 1914; Member, Indian Industrial Commission, 1916-18. Died 1921.

STILL, CHARLES, C.I.F.; Indigo Planter; *b.* 1849. *Educ.*: privately. *Address*: Sathi Factory, Chumparun.

STIRLING, GEORGE CLAUDIUS BERESFORD, C.I.E.; Supdt. and Pol. Officer, S. Shan States, since 1910; *b.* 1861; Ent. Burma Pol. Dept., 1888. *Address*: Taunggyi, S. Shan States, Burma.

STOKES, HOPETOUN GABRIEL, C.I.E., B.A.; Dy. Sec., Govt. of India, Fin. Dept., 1911-13; Fin. Mem., Imp. Delhi Committee, 1913-15; Priv. Sec to Gov. of Madras, 1915. Pol. Ag., Banganapelly, Madras. *Educ.*: Clifton; Oriel Coll., Oxford. Ent. I.C.S., 1895. *Address*: c/o Binny & Co., Madras.

STONEY, EDWARD WALLER, C.I.E., M.E., M.I.C.E.; M Inst. C.E.; late Ch. Eng. of Madras Ry. (retired), 1904; 4th *s.* of late T.G. Stoney, J.P., of Kyle Park and Arranhill, Co. Tipperary, Ireland; *m.* 1875; Scholar, Gold Medallist and M.E., Queen's University, Ireland; Fellow, Madras University. *Publications*: various engineering papers. *Address*: The Gables, Coonoor.

STRANGMAN, SIR THOMAS JOSEPH, KT. (1920): B.A., LL.B.; Adv. Genl., Bombay; *b.*7January 1873. *Educ.:* Charterhouse and Trinity Hall, Cambridge. Called to Bar at Middle Temple, 1896; admitted as Adv. of Bombay H.C., 1896; acted as Ch. Presy Magte., Bombay, from June 1901 to May 1902; acted as Admr. Genl and Official Trustee, Bombay, May 1902 to Nov 1903; Adv.-Genl, Bombay, Oct 1908 to April 1915 and from Nov. 1916. *Address:* Malabar Hill, Bombay.

STREET, LT.-COL. ASHTON, M.B., F.R.C.S., I.M.S (retd.): Late Principal, Grant Medical Coll Late Dean of Faculty of Medicine, Bombay Univ.; Surgeon-Superintendent, St. George's Hospital; *b.* 1864. *Educ* · Downing Coll., Cam. *Address:* St. George's Hospital, Bombay.

STRINGFELLOW, HENRY PARKER; Manager, Bank of India, Ltd., Bombay; *b.* 22 Sept 1862 *m.* Dorothy *d.* of Rev. W. H. Heaven Vicar of Nethravon, Wiltshire *Educ.* Brighton G. S. London and County Bank Lombard Street, London, 1882-1890; Alliance Bank of Simla, Ltd, 1890-1906; and Manager, Bank of India, Ltd, since 1906. *Publications* Notes on Banking Practice in India. *Address:* Nepean Sea Road, Malabar Hill, Bombay.

STUART, LOUIS, C.I.E., I.C.S; 1st Add Jud. Commsr., Oudh since 1911; *b.* 12 March 1870. *Educ.:* Charterhouse; Balliol Coll, Oxford. Ent. I.C.S., 1891; Jud. Sec. to Govt. and nom. as Mem. of U. P. Council, 1910-12. Offg. Puisne Judge, High Court, Allahabad; Lt.-Col. commanding Allahabad Auxiliary Force *Address;* Allahabad.

STUART, CAPT. MURRAY, D.Sc. (Birm.), B.Sc. (Lond.), F.G.S., F.C.S.; Geol. Surv. of India, since 1907; Prof. of Geol. in Poona Coll of Engineering, in addition to other duties. 1916-17. Attached Afghanistan and North-West Frontier Expedition, 1919; attached Mahsud Expedition, 1919-20 (mentioned despatches). Retired with rank of Captain, 1920; *b.* 5 Nov. 1882. *Educ.;* King Edward's H. S., Birmingham and Birmingham Univ, I.E.S. as Prof. of Geol, Presidency Coll., Madras. 1911-14. Ag. Superintendent, Madras Government Museum, and Ag. Dir. Madras Govt Marine Aquarium, 1912; Univ. lecturer in the Madras University, 1913-14. *Address;* Geological Survey of India, Calcutta, and Royal Societies Club, London.

STUART, MAJ.-GEN. SIR ROBERT CHARLES OCHILTREE, K.C.S.I., C.S.I.; Mem., Ind. Munitions Board, 1917-20; *b.* 22 Aug. 1861. *Educ.:* Woolwich. Ent. R. A., 1880; I. O. D., 1889; Dir. Gen. of Ordnance, India, 1911-17. *Address:* Forest Hill, Simla.

STUART WILLIAMS, SYDNEY CHARLES, M.A. (Cantab.); B. A. (London). Deputy Chairman, Calcutta Port Commissioners. *b.* 9 May 1876; *m.* Feb. 1903; 35. *Educ.;* Kingswood Sch. Bath; Univ. Coll., Aberystwyth and Trinity College, Cambridge; Private Sec. to Sir. Edward Holden, 1900: Junior Sec. to Agent, E. I. Ry., 1900-03; Dy. Sec to Agent, E. I. R. 1903-06; Secy. to Agent E. I. R., 1906-14; Sec., Port Commissioners, Calcutta, 1914-16; Vice-Chairman, 1916. Dy. Chairman and (temporary) Chairman, 1921. *Publications:* The Economics of Railway Transport, 1909; Article on Indian railways in Modern Railway Practice, 1913 *Address:* Port Commissioners' House, Calcutta

SUBRAMANIA IYER, SIR SUBBAYYER, K.C.I.E.; retired Judge of Madras High Court; *b.* 1842. *Address:* Beach House, Mylapur, Madras.

SUDBOROUGH, PROF. JOHN JOSEPH, Ph.D., D.Sc., F.I.C.; Prof. of Org. Chem., Ind. Inst. of Sc.; *b.* Birmingham, 1869. *Educ.:* King Edward's Sch. Camp Hill, Birmingham; Mason Coll., Birmingham; Univ. of Heidelberg; Owen's Coll., Manchester, D.Sc. London; Late Prof. of Chem. and Dean of Fac. of Sc. Univ. Coll. of Wales, Aberystwyth. *Address:* Bangalore.

SUKHIA, DR. NADIRSHAW H. E., L.M. & S., L.V. Sc. (Spl); F.R.S.I. (Lond)., Mun. Councillor (1901); J.P. (1911); Hon. Presy. Magte. (1913); Del., the Parsi Chief Matrimonial Court 1916)) Member, Schools Committee (1916); Member, Prince of Wales Museum Trust Board (1920); Member Development Committee (1921) Physician and Sanitarian; *b* 26 May 1860; *Educ.*; Graduate, Bombay Univ, 1883 Univ. Medl. Examr. Bombay Univ, 1895; Lecturer in Anatomy and Physiology Govt. Vety. Coll; Con. Vety. Surgeon, Assist. Surgn, Indian M. Service; Med. Officer in charge of H. H. ex-King Theebaw of Burma and Suite and Ag Civil Surgn, Ratnagiri; Mem, Standing Committee, Bombay Mun. Corpn, (1911 to 1918). *Publications.*—Persian Translation of Aesop's Fables, Pickings from the Avesta, Juddin controversy, comparative Anatomy of the Domesticated Quadrupeds and Notes (minutes etc) on various Municipal Matters, the Municipal Act and law of Public Meetings. *Address:* Sukha Buildings, Cowasji Patel Street, Bombay.

SUNTH, MAHARANA SRI JORAWARSINHJI, RAJA OF; *b.* 24 March 1881; *S.* 1896. *Address:* Sunth, Rewa Kantha.

SUTHERLAND, LIEUT.-COL. DAVID WATERS., C.I.E., V.H.S., I.M.S; Prin and Prof. of Medicine, Med. Coll, Lahore, and Dean, Med. Fac., Punjab Univ.; *b.* Australia, 18 Dec. 1871. *Educ.:* Melbourne and Edinburgh Univ. M.D., Edin. M.B., C.M. Edin. M.R.C.P., Lond, F.R.S., Edin., Fell.; Roy. Soc., Med., London. *Address:* 28, Jail Road, Lahore.

SYED, SIR ALI IMAM, K.C.S.I., (1914), C.S.I. (1911). Law Member of Governor-General's Council, 1910-16; *b.* Neora (Patna), 11 Feb. 1869; *s.* of Nawab Syed Imdad Imam, Shamsul-ulama; *m.* 1891; five *s.* four *d.* Called to bar, Middle Temple, 1890; Standing Council Calcutta High Court; President, 1st Session of the All-India Moslem League held at Amritsar 1908; Mem., Moslem League Depn. to England 1909, member of Governor's Legislative Council, Bengal, 1910, Fellow of Calcutta University, 1908-12; Puisne Judge of Patna High Court, 1917; Member, Executive Council of Behar and Orissa, 1918; President, Executive Council of the Government of the

Nizam of Hyderabad 1919. First Indian Representative to sit at the first meeting of the League of Nations, Novr. 1920. *Address*: Mariam Munzil, Patna; also Bella Vista, Hyderabad (Deccan).

TAGORE, ABANINDRA NATH, C.I.E.; Vice Prin., Govt. Sch. of Art, Calcutta, since 1905 • Zemindar of Shazadpur, Bengal; *b.* 1871; *Educ.*: Sanskrit Coll., Calcutta, and at home; Designed Memorial Address to Lady Curzon. Casket presented to King by Corp. of Calcutta; 1911; principal work consists in reviving School of Indian Art. *Address*: 5, Dwarkanath Tagore's Lane, Calcutta.

TAGORE, MAHARAJA BAHADUR SIR PRODYOT COOMAR, KT.; *b.* 17 September 1873. *Educ.*: Hindu Sch., Calcutta; afterwards privately: Sheriff of Calcutta, 1909; Trustee, Victoria Mem. Hall; Trustee, Indian Museum; Mem. of Asiatic Soc. of Bengal; formerly Mem., Bengal Council. *Address*: Calcutta.

TAGORE, SIR RABINDRANATH, KT., D.Lit. (Calcutta Univ.); *b.* 1861. *Educ.*: privately. Lived at Calcutta first; went to country at age of 24 to take charge of his father's estates; there he wrote many of his works; at age of 40 founded school at Shantiniketan, Bolpur; this has been his life-work ever since; visited England, 1912, and translated some of his Bengali works into English; Nobel Prize for Literature, 1913. *Publications*: In Bengali—about 30 poetical works, and 28 prose works, including novels, short stories, essays, sermons, dramas, etc. In English—Gitanjali, The Gardener, Sadhana, The Crescent Moon, Chitra, The King of the Dark Chamber; The Post Office, a Play, 1914; Fruit Gathering; Nationalism, 1917; Personality, 1918; Stray Birds, 1919; Sacrifice, 1919; Lover's Gift, 1919; Reminiscences, 1919; The Wreck, 1921. *Address*; Shantiniketan, Bolpur.

TASADDUK RASUL KHAN, RAJA SIR K.C.S.I.; Taluqdar of Jahangirabad, Mem. of U.P. Council; Mem. B. I. Assoc., Oudh. awarded Sword of Honour for war services 1919. *Address*; Jehangirabad Raj, Dist Bara Banki.

TATA, SIR DORABJI JAMSETJI, KT., J.P., senr. partner, Tata Sons, Ld. *b.* 27 Aug. 1859; *s.* of late Jamsetji Nusservanji Tata, *m* 1898, Meherbai, *d.* of H. J. Bhabha. *Educ.* Caius Coll., Camb.; Bombay Univ. *Address*; Wandby Road, Bombay.

TAVEGGIA, RT. REV. SANTINO; Bishop of Krishnagar, since 1906; *b.* Italy, 1855. Went to India, 1879. *Address*: Krishnagar.

TAW SEIN KO, C.I.E., I.S.O.; Examiner in Chinese, Burma, since 1906; *b.* 7 Dec. 1864. *Educ.*: Christ's Coll., Camb.; Burmese and Pali Lecturer, Rangoon Coll., 1882-85; Asst. Sec. to Govt. of Burma, 1889-01; Burmese Lecturer Cambridge, 1892-93. ; Supdt., Archæological Survey, Burma Circle, 1899-1919. *Publications*; Burmese Sketches, Vols. I and II; Selections from the Records of the Hluttaw; Translation of Maha Janaka Jataka; Elementary Handbook of the Burmese Language. *Address*; Mandalay.

TEGART, CHARLES AUGUSTUS, C.I.E., M.V.O.; Indian Police; officiated as Dy. Insp.-Gen. of Police, Calcutta; *b.* 1881. *Educ.*: Portora Royal Sch., Enniskillen; Trinity Coll., Dublin. Joined Indian Police, 1901.

TEHRI, CAPTAIN H.H. RAJA NARENDRA SHAH SAHAB BAHADUR, of Tehri-Garhwal State, *b.* 3 Aug 1898. Succeeded 1913. *Educ.*: Mayo Coll., Ajmer. *Address*: Tehri, Garhaval State.

THACKERSEY, SIR VITHALDAS DAMODHER, KT., J.P.; millowner; *b.* 1 Dec. 1873. *Educ.*: Elphinstone Coll., Bombay; controls five of largest cotton mills in Bombay; Mem. of Bombay Council, 1903-10; Pres. of Bombay Corpn., 1907; Chairman of Millowners' Assoc.; Pres. of Industrial Confce., Calcutta, 1906; Dir. of many Joint-Stock Companies; Mem. of Imp. Council; 1910-13. *Address*: "Damodar Bhuvan", Warden Road, Bombay.

THAKUR, RAO BAHADUR KASHINATH KESHAV, I.S.O.; Sen. Div. and Sess. Judge, Nagpur since 1911; *b.* 15 Feb. 1860. *Educ.*: Saugor and Jubbulpore H. S.; Muir Central Coll., Allahabad. *Address*: Nagpur.

THOMPSON, LT.-COL. CYRIL POWNEY, C.B.E., I.A. retired, now Adviser to H. H. the Raja of Chamba. *b.* 21 Aug 1864; *m.* Mary Alice Helen (M.B.E.), *d.* of Lt.-Gen. R. C. Clifford C.B. *Educ.*: Charterhouse and Sandhurst Joined Wilts. Regiment, 1885. 3rd Sikhs P.F.F., 1888. Punjab Commission, 1889. *Address*: Chamba, Punjab.

THOMPSON, JOHN PERRONET, C.S.I. (1919): on special duty in Foreign and Political Department *b.* 8 March 1873, *m.* Ada Lucia, *d.* of the late R. Y. Tyrrell, Litt. D. Senr. Fellow, Trinity Coll, Dublin. *Educ.*: Leeds Gr. Sch. and Trin. Coll., Cambridge. 1st Class Classical Tripos. President of the Union (1895). Entered I.C.S., 1897. Revenue Sec. to Punjab Govt., 1913. Ch. Sec. 1916. Mem. of Indian Leg. Council, 1918-19. Member of Reforms Committee, 1918-19 President, Railway Police Committee, 1921; President, Punjab Historical Society and formerly Fellow and Syndic of the Punjab University. *Address*; Lahore, or U. S. Club, Simla.

THORNTON, HUGH AYLMER, C.I.E., B.A., I.C.S.; officiating Commissioner, Mandalay Division. *Educ.*: Cheltenham, Christ Church, Oxford (B.A.). Ent. I.C.S., 1895. *Address*: Civil Lines, Mandalay.

THULRAJ, TALUQDAR OF, RANA SIR SHEORAJ SINGH BAHADUR OF KHAJURGAON, K.C.I.E.; Rai Bareli District; *b.* 1865; *m.* 1st, *d.* of Babu Amarjit Singh, *g. b.* of the Raja of Majhouli; 2nd, *d.* of Raja Somesurdatt Singh, a Raja of Kundwar; 3rd, *d.* of the Raja of Bijapur District. *Educ.*: Govt. H. S., Rai Bareli. *S.* father, 1897; descended from King Sahvahan, whose Sumvat Era is current in India. *Heir*: Kunwar Lal Eima Natti Singh Bahadur. *Address*: Thulrai, Khajurgaon.

TINNEVELLY, BISHOP OF, since 1915, RT. REV. EDWARD HARRY MANSFIELD WALLER, M.A. (Cantab.); *b.* 8 Dec. 1871. *Educ.*: Highgate Sch. Corpus Christi Coll., Cam. Ordained 1894; Principal, St. Paul's Divinity Sch., Allahabad, 1903; Sec., C.M.S., Indian

Group, 1913; Canon of Lucknow, 1910-15. *Address:* Bishopstown, Palamcotta.

TODHUNTER, SIR CHARLES GEORGE, K. C.S.I. (1921). O B.C. Member of Executive Council, Madras. *b.* 16 Feb. 1869. *Educ.:* Aldenham Sch. and King's Coll., Cambridge. Member's prizeman, Cambridge University, 1888; *m.* Alice, *d.* of Captain C. Losack, 93rd Highlanders. Served in I.C.S., Madras: also conducted special inquiries into Customs and Excise matters in Kashmir, the C. P. and C. I. States. Sec., India Excise Committee, 1906. I.G of Excise and Salt to the Govt. of India, 1909-12. President, Life Saving Appliances Committee, 1913. *Address:* The Hermitage, Mylapore, Madras.

TOLLINTON, HENRY PHILLIPS, C.I.E., I.C.S; Commissioner, Rawalpindi; Deputy Commsr., Simla since June 2; *Educ.:* Leamington Coll., Balliol Coll, Oxford. Ent. I.C.S., 1893 *Address;* Delhi.

TOMKINS, HERBERT GERARD, C.I.E., F.R.A.S.; Acct.-Gen., Bengal; *b.* 21 April 1869. *Educ.:* privately. Joined Fin. Dept. of Govt. of India, 1891. *Address:* 9, Riverside, Barrackpore.

TOMKINS, LIONEL LINTON, C.I.E.; Dy. Insp.-Genl. of Police, Punjab, since 1914; Ent. India Police Dept. in 1891; *Address:* Lahore.

TONK, H. H. AMIN-UD-DAULA WARIRUL MULK NAWAB SIR MUHAMMAD IBRAHIM ALI KHAN BAHADUR SAULAT JANG, G.C.I.E., G.C.S.I.; *b.* 1848; *S.* 1867. State has area of 2,558 sq. miles and population of over 287,893. *Address:* Tonk.

TOTHILL, REAR-ADMIRAL SIR HUGH HENRY DARBY, K.C.M.G. (1918), C.B. (1916), Commander-in-Chief, East Indies, since August 1919. *b.* 1865. Served in Egyptian War, 1882, and the European War, including the Battle of Jutland in which he was a subdivisional leader. Fourth Sea Lord, May 1917-June 1919. Retired, 1921.

TRAVANCORE, H. H. SIR BALA RAMA VARMA, MAHARAJAH OF, G.C.I.E., G.C.S.I., M.R.A.S., Officer de l'instruction Publique; *b.* 25 Sep. 1857; *S.* 1885. State has area of 6,730 sq. miles and population of 3,000,000. *Address:* Travancore.

TRAVANCORE AND COCHIN, SOUTH INDIA, BISHOP OF, since 1905, RT. REV. CHARLES HOPE GILL, M.A., D.D.; *b.* 11 Feb. 1861. *Educ.:* St. Edmund's Sch., Canterbury; King William's Coll., Isle of Man; Queen's Coll. and Ridley Hall, Cambridge. *Address:* Kottayam.

TROTTER, HON. JUSTICE VICTOR MURRAY COUTTS, M.A.; Puisne Judge of Madras High Court, since 1915; *b.* 12 May 1874. *Educ.:* St. Paul's Sch.; Balliol Coll., Oxford; called to Bar (Inner Temple), 1901; joined N. E. Circuit, 1902. *Address:* High Court, Madras.

TUDBALL The Hon Sir WILLIAM, KT. (1921), Puisne Judge, Allahabad High Court, since 1909; *b.* 15 Mar. 1866. *m.* Katie, *d.* of Charles John Aheen. *Educ:* Bedford Mod. Sch.; Christ Church, Oxford. I. C. S., 1887; Addl. Jud. Commsr., Oudh, 1908. *Address:* 27 Stanley Road, Allahabad.

TULEY, LT.-COL. JOHN S. A., Financial Secretary for the Salvation Army Western India Territory. Formerly General Secretary, Madras and Telugu Territory, Arrived in India Dec. 1897. *b,* 6 May 1870 (Manchester). *Address;* S. A. Western India Territorial Hdqrs., Morland Road, Byculla, Bombay.

TWEEDY, GEORGE ALFRED, I.C.S.; Mem. of Board of Rev. U.P., since 1911; Mem. of U.P. Council. *Educ.:* King's Coll., London. Ent. I.C.S., 1879; Commsr. of a Division, 1903. *Address:* Allahabad.

TYABJI, HUSAIN BADRUDDIN, M.A. (Honours), LL.M. (Honours), Cantab. 1896; Bar-at-Law. Second Judge, Presidency Court of Small Causes, Bombay. *b.* 11 October 1873; *m.* Miss Nazar Mohammad Fatehally. *Educ.:* Anjuman-e-Islam, Bombay; St. Xavier's School and College; Downing College, Cambridge. Practised in the Bombay High Court. *Address:* Almanzil, Malabar Hill, Bombay.

UDAIPUR, H. H Maharajadhiraj MAHARANA SIR FATEH SINGHJI BAHADUR OF, G.C.S.I., G.C.I.E., G.C.V.O., Maharana of Udaipur, Mewar. *b.* 1848. *Address;* Udaipur.

UDAIPUR, H. H. THE RAJA OF, CHANDRASHEKAR PRASAD SINGH DEO, CHIEF OF. *Address:* Udaipur.

ULLAH, VEN. IHSAN; Archdeacon of Delhi; Achdeacon in Lahore Diocese, since 1910, and Supdtg. Missionary of Toba Tek Singh Mission; *b.* 1857. *Educ.:* Baring H. S. Batala; Lahore Div. Coll. *Address:* Holy Trinity Church, Lahore.

UNIACKE, MAJOR-GENERAL SIR HERBERT CROFTON CAMPBELL, K.C.M.G., *cr.* 1919; C.B., 1918; C.M.G., 1916; G.O.C., Rawalpindi District; *b.* 4 Dec. 1866. *m.* Minnie Mary, *d.* of late Thomas Wild of Thorner, Yorkshire, 25; *Educ.;* Woolwich. Commissioned Royal Artillery, 1885. Served three terms as Adjutant; Chief Instructor Royal Horse and Royal Field Artillery; Commandant, School of Instruction, Shoeburyness; served European War, 1914-18 (despatches ten times, K.C.M.G., promoted Maj.-General, C.B., Commander Legion of Honour), Commander Order of Savoy (Italy), Grand Officer Order of Avis (Portugal); 1st class order of St. Anne (Russia), Croix-de-guerre (Belgium); *Address:* Park House, Rawalpindi.

VAUGHAN, MAJ.-GEN. LOUIS RIDLEY, D.S.O. (1915); C.B. (1918); Officer of the Legion d'Honneur (1919); Commandant, Staff Coll., Quetta. *b.* 7 August 1875. *Educ.:* Uppingham and R. M. C., Sandhurst. *m.* Emilie, *d.* of J. P. Egan of St. Stephen's, Cork. Served with 25th Madras Infantry, 78th Moplah Rifles, 113th Infantry, 7th Gurkha Rifles, and on the Staff in France, 1914-19. Served in the Afghan War, 1919, in command of 4th War Division. *Address:* Staff College House, Quetta.

VENKATASWETA CHALAPATI RUNGA-RAO BAHADUR, MAHARAJAH SIR RAVU, MAHARAJAH OF BOBBILI, G.C.I.E., C.B.E., Maharajah, 1900; Ancient Zemindar of Bobbili; *b.* 28 Aug. 1862. *Educ.:* Bobbili, privately. Ascended Gaddi in 1881; Pres. of Madras Landholders' Assocn.; Life Mem., Royal Asiatic Soc.; Mem. of Madras Council, 1896, 1898, 1900, and 1902; First Native Mem. of Madras Exec. Council, 1910-11. *Publications;* Advice to the Indian Aristocracy, Hindu Religion, Diary in Europe, Criticism on the *Ramayana* and the *Mahabharata. Address;* Bobbili, Madras Presidency.

VERRIERES, ALBERT CLUDE, C.I.E.; Joint Chief Engineer (1920), P. W. D. *m.* 1899 Mabel Blanche *d.* of the late Francis Moore; *Educ.:* St. Peter's Coll. Agra; Thomason Civil Engineering Coll., Roorkee. Ent P. W. D. 1893, Under Secy. to Govt., P. W. D., Naini Tal, 1911-14; Exe. Eng., Dehra Dun 1915-16; Supdtg. Eng. 1916-18; Sanitary Eng. 1918-19; Offg. Chief Engineer, United Provinces, 1920-21. *Address:* "Dar-ul-Shafa" Lucknow.

VIEIRA DE CASTRO, RT. REV. THEOTONIAS MANOEL RIBEIRO, D.D., D.C.L.; R. C. Bishop of Mylapore, since 1899; *b.* Oporto, 1859. *Educ.:* Gregorian Uni., Rome. *Address:* San Thome, Madras.

VIJAYARAGHAVA CHARYA DIWAN BAHADUR, M.B.E. (1919); Diwan of Cochin. *b.* 27 August 1875. *Educ.:* Presidency College, Madras. Joined Provincial service, 1898; Revenue Officer, Madras Corpn., 1912-17. *Address:* Ernakulam.

VINCENT, SIR WILLIAM HENRY HOARE, KT., K.C.S.I. (1918). Mem. of Viceroy's Exec Council 1917; Vice-President of the Governor-General's Executive Council 1921; *b.* 1866, *Educ.:* Christ Coll. Brecon; Trinity Coll., Dublin. Ent. I. C. S. 1887; served in Bengal in various capacities offg. as Judge, Calcutta High Court, 1909 and 1910; Sec. in Leg. Dept., Govt. of India, 1911-15; Mem., Exec. Council, Bihar and Orissa, 1915-17. Served on Commission to enquire into the medical arrangements in Mesopotamia, 1916. *Address:* Delhi or Simla.

VINES, CAPTAIN DUNCAN FREDERICK, O.B.E. (1919), Captain R.I.M. *b.* 7 October 1868. *Educ.:* St. Lawrence Coll., Ramsgate. *m.* Constance, *d.* of H. W. Smithers, Esq. Appointed R.I.M., 1890. Commander, 1906. Captain, 1917. Five years Port Officer and Shipping Master, Calcutta. *Address:* R.I.M. Dockyard, Calcutta.

VISVESVARAYA, MOKSHAGUNDUM, SIR, K.C.I.E., L.C.E., M.I.C.E., late Dewan of Mysore; *b.* 15 Sept.1861. *Educ.:* Central Coll., Bangalore, and Coll. of Science, Poona. Asst. Engineer, P.W.D. Bombay, 1884; Supdt. Eng., 1904; retired, 1908. Apptd. Sp. Consulting Eng. to Nizam's Govt. 1909; Ch. Eng. and Sec., P.W. and R. Depts., Govt. of Mysore, 1909; App. Dewan of Mysore, Nov. 1912.—1918. *Publication:* "Reconstructing India" (P. S. King and Son, Ltd. London) *Address.* High Ground, Bangalore.

VOLKERS, ROBERT CHARLES FRANCIS, C.I.E.; Sec. Railway Board, 1907-13; Accountant, P. W. D., since 1878; Examiner, 1894. *Address:* Calcutta.

WACHA, SIR DINSHA EDULJI, KT.; a Governor of the Imperial Bank of India (1920) and Member, Council of State (1920). *b.* 2 Aug. 1844; *Educ.:* Elphinstone Coll., Bombay. In Cotton Industry, since 1874; for 30 years Bombay Mun. Corpn. (President, 1901-02); for 32 years, Mem., Bombay Millowners' Association Committee since 1889 and President in 1917 and Member, Bombay Imp. Trust since its formation in 1898 up to 1919; Pres. of 17th National Congress, Calcutta, 1901; and of Belgaum Prov. Conference, 1894; gave evidence before Royal Commission on Indian expenditure in 1897; Trustee of Elphinstone Coll.; also Chairman, Indian Merchants' Chamber and Bureau; was Gen. Sec., Indian National Congress for 18 years from 1984; Trustee of Vic. Jubilee Technical Institute from 1902 and Hon. Sec. since 1909; Member, Bombay Legislative Council (1915-16); President, Western India Liberal Association since 1919. Was Secretary, Bombay Presidency Association from 1885 to 1915 and President from 1915 to 1918. *Publications:* pamphlets on Indian Finance and Economics, Agricultural Condition of India, Railways, Currency, Temperance Military Expenditure, etc.; large contributor to leading Indian newspapers and journals for the last 35 years; also had published History of Share Speculation, 1863-64; Life of Premchand Roychand; Life of J. N. Tata; the Rise and Growth of the Bombay Municipal Government and My Recollections of Bombay (1860-75). *Address;* Jiji House, Ravelin Street, Fort, Bombay.

WADDINGTON, CHARLES WILLOUGHBY, M.A., C.I.E., M.V.O., I.E.S.; Tutor and Guardian to H. H. the Maharajah of Jodhpur, Vice-Principal Rajkumar College, Rajkot 1892-5; Principal 1895-1903. Prin., Mayo Coll., Ajmer, 1903-18; *b.* 29 Dec. 1865. *Educ.:* Charterhouse; Oriel Coll., Oxon. *Address:* Jodhpur, Rajputana.

WADIA, C. N., C.I.E. (1919); Millowner. *b.* 1869. *Educ.:* King's Coll., London. Joined his father's firm, 1888. Chairman, Bombay Millowners' Association (1918). *Address:* Pedder House, Cumballa Hill, Bombay.

WADIA, JAMSETJEE ARDASEER, J. P., 1900; Merchant; *b.* 31 Oct. 1857. *Educ.:* Elphinstone Sch. and Coll. and served apprenticeship in Dickinson Akroid & Co. of London; Promoter and Director of Cotton and other industrial concerns; Member of Bombay Mun. Corpn., since 1901. *Publications:* Writer on Industrial and Economic subjects: published two pamphlets against closing of the Mints. *Address:* Wilderness Road, Malabar Hill, Bombay.

WADYA, SIR HORMASJI ARDESAR, Kt. (1918), Bar.-at-Law. *b.* 2 January, 1849. *Educ.:* Elphinstone College, Bombay, and University College, London. *m.* Aimai, *d.* of the late Mr. Ardesar Hormasji of Lowji Castle, Parel. Called to the Bar, 1871. Personal Assistant to Mr. Dadabhai Naoroji, Dewan of Baroda February 1874 to January 1875. Practised in Kathiawar since 1875. Trustee, Parsi Panchayat, 1912. Trustee of the late Mr. N. M. Wadia under his will, 1909. Recd. Kaiser-i-Hind Gold Medal, 1918. *Address:* 37, Marine Lines, Bombay.

WALKER, Lt.-Col. George Kemp, C.I.E., O.B.E., Fell. of Royal Coll. of Vet. Surgs.; Principal, Punjab Veterinary College, Lahore, *b* 20 March 1872; *m.* Jan. 10 1899, *Educ.:* Warwick Sch.; R. V. C., London. Commission A. V. D., 1894; transferred to Civil Employ 1897. *Address*: Lahore.

WALKER, Gilbert Thomas, M.A., C.S.I., F.R.A.S., Sc D., F.R.S.. ; Dir. Gen. of Indian Observatories, since 1904; *b.* 1868; *Educ.:* St. Paul's Sch ; Trinity Coll., Camb. (Senior Wrangler, 1889) ; Fell,. 1891 ; Math Lecturer, 1895. *Address :* Meteorological Office, Simla.

WALKER, Sir James, K.C.I.E., C.I.E., Commsr., Nagpur; Add. Mem., Imp. Council 1913; *b.* 1864. *Educ.:* Aberdeen Univ.; Balliol Coll., Oxford. Served in executive branch of I.C.S., in Madras and C.P. *Address:* Nagpur.

WALMSLEY, Hugh, M.A., I.C.S.; Judge, Calcutta High Court, since 1915; *Educ.:* Merton Coll., Oxford. Ent. I.C.S., 1893. *Address:* High Court, Calcutta.

WANKANER, Captain His Highness Maharana Sir Amarsinhji, Raj Saheb of, K.C.I.E.; *b.* 4 Jan. 1879; S. 1881; *Educ.:* Rajkumar Coll State has area of 425 sq. miles, and population of 36,823. Salute, 11 guns. *Address:* Wankaner, Kathiawar.

WARBURTON, John Paul, C.I.E.; *b.* 28 Aug. 1840. Joined Pol. Dept., Punjab, 1864; Asst. Insp. Gen., Railway Police, 1894; retired, 1900. *Address:* Gilbert House, Kasauli.

WARD, Arthur William, M.A.; Prof. of Physics, Canning Coll., Lucknow, since 1889; *b.* Waterloo, 1 Aug. 1858. *Educ.:* Liverpool Coll.; Liverpool Inst.; St. John's Coll., Camb.; Fell. and Mem. of Syndic, Allahabad Univ. Mem. of Senate, Benares Hindu Univ., 1916. *Address:* Badshah Bagh, Lucknow.

WARD, Sir Thomas Robert John, C.I.E., M.V.O.; *Educ.:* Framlingham Sch., Cooper's Hill. Ent. P. W. D., 1883; on dep. with Seistan Boundary Commission, 1902-06; Engineer, Delhi Durbar, 1911; Engineer to Home Dept., Govt. India, for selection of site for new capital, Delhi, 1912; services lent for 18 months to King of Siam to inaugurate irrigation works in Valley of Menam Chao Phaya; Ch. Eng. and Sec. to Punjab Govt., 1915; Mem., Punjab Council, 1915; F.R.G.S.; M.I.C.E.; M.A.M.C.E. *Address:* Lahore.

WARNE, Rt. Rev. Francis Wesley, Bishop of the Methodist Episcopal Church since 1900. *b.* 30 Dec. 1854. *Address*: Inayat Bagh, Lucknow.

WATHEN, Gerard Anstruther, M.A., I.E.S. Prin., Khaesa Coll., Amritsar, since 1915; *b.* 28 Dec. 1878. *m.* 1909 Melicant, *d.* of the late C. L. Buxton. *Educ.:* St. Paul's Sch.; Peterhouse; Camb.; Asstt. Master, Tonbridge School, 1903-05; Prof. of Govt. Coll., Lahore, 1905-1914; Inspector of Schools, Jullunder, 1914-15. *Address*: Khalsa College, Amritsar,

WATT, Rev. John, M.A., D.D., F.C.S.; Prin., Scottish Churches Coll., Calcutta; *b.* 1862. *Educ.:* Parish Sch., Methlick; Gram. Sch., Old Aberdeen; Aberdeen Univ.; New Coll., Edinburgh. Joined Duff Coll., Calcutta, 1888. *Address:* 4, Cornwallis Square, Calcutta.

WEBB, Charles Morgan, C.I.E., (1921) Chairman, Rangoon Development Trust and Vice-Chancellor, Rangoon University. *b.* 30 June 1872. *m.* Lilian Elizabeth Griffiths. *Educ.:* St. Peter's, Wolverhampton; Mason' Coll., Birmingham; St. John's Coll., Cambridge. (1st Class Math. Honours.) Dy. Commr, Burma, 1901. Settlement Officer, 1903. Suptd, Census Operations, Burma, 1910. Ch. Sec. to Govt. of Burma, 1919. *Publications:* Reports on Census Operations in Burma. *Address:* 1 Fontenoy Road, Rangoon.

WEBB, Sir Montagu de P., Kt. (1921); C.I.E. Founder of The War League of India; Chairman, Karachi Chamber of Commerce; *b.* Clifton, 1869. *Educ.:* privately. *m.* Catharine Frances, *d* of Col. F.C.W. Rideout. Engaged in mercantile pursuits. *Address:* Karachi.

WEBSTER, John Edward, C.I.E., I.C.S. Dy. Commsr., Sylhet, Assam, since 1912; *b.* Ranchi, 3 Sept. 1871. *Educ.:* Charterhouse; Trinity Hall, Cam.; Ent. I.C.S., 1891. *Address:* Sylhet.

WESTCOTT, Rt. Rev.F., *see* Calcutta, Bishop of.

WESTCOTT, Rt. Rev. G. H., *see* Lucknow Bishop of.

WHEELER, Sir Henry, K.C.S.I. (1921, K.C.I.E., I C.S.; Mem., Exec. Council, Benga, since 1917. *Educ.:* Christ's, Coll., Cam. Ent. I.C.S., 1891; Dy. Sec., Govt. of India, Fin. Dept., 1907-08; Sec., Royal Commission on Decentralisation, 1908-09; Fin. Sec., Govt. of Bengal, 1909-12; Home Sec., Govt. of India, 1912-16. *Address:*

WHEELER, The Venerable Hugh Trevor M.A.,(Dublin), Archdeacon of Lahore, 1919. *b.* 27 September 1874. *m.* Kathleen Gunning *Educ.:* Trinity College, Dublin. Chaplain, to the Forces, M.E F., 1915. *Address*: The Parsonage, Karachi.

WHITE, Major Frederick Norman, C.I.E. M.D.; Asst. Dir.-Gen., I.M.S. (Sanitary) 1914; Sanitary Commsr., Govt. of India Simla. *Address:* c/o Grindlay, Groom & Co. Bombay.

WHITTY, John Tarlton, C.I.E.; Deputy Commissioner, Ranchi. *Educ* : Clifton Coll.; New Coll., Oxford; Univ. Coll , London. Ent. I.C.S., 1898; *Address*: Ranchi.

WHYTE, the Hon. Sir Alexander Frederrick, Kt. (1922); Presdt. Indian Legisl. Assembly; *b* 30 September 1883. *Educ.*: Edinburgh Academy: Abbotsholme; Jena Univ.; Edinburgh Univ.; Grenoble Univ. *m.* Margaret Emily *d.* of the Rev. W. Fairweather, D. D. Lecteur d'Anglais at the Sorboune, 1905-06. Industrial Insurance Comr., Vienna and Budapest, 1908. Pol. Sec. to Lord Lucas (Under Sec. for War) 1908-10. M. P. for Perth 1910-18. Part. Pte. Sec. to Mr. Churchill, 1910-15. One of the founders of *the New Europe* and joint Editor, 1917-20. Lt T. R. N. V. R. 1914-18. *Address:* Legislative Assembly, Delhi.

WILLIAMS, Capt. Herbert Armstrong, D.S.O., I.M.S.; Resident Medical Officer, Rangoon General Hospital, since 1907; *b.* 11 Feb. 1875. *Address:* General Hospital, Rangoon.

WILLIAMS, Rushbrook Laurence Frederic, M.A., B. Litt. (Oxon,) 1920, O.B.E. 1920. Director, Central Bureau of Informa-

tion, Government of India; *b.* 10 July 1891. *Educ.* University College, Oxford, Private study in Paris, Venice, Rome. Lecturer at Trinity College, Oxford 1912, travelled Canada and U. S. A. 1913. Fellow of All Souls 1914. Attached General Staff Army Headquarters India, 1916. Professor of Modern Indian History, Allahabad University, 1915-1919. On special duty with the Government of India, 1918-1921 in India, England and America. *Publications*: History of the Abbey of St. Albans; Four Lectures on the Handling of Historical Material; Students Supplement to the *Ain-i-Akbari*; A Sixteenth Century Empire Builder. India in 1917-18, India in 1919, India in 1920. *Address*: Home Department, Government of India.

WILLINGDON, 1st Baron, of Ratton, *cr.* 1910; FREEMAN FREEMAN-THOMAS; Governor of Madras, 1919. *b.* 12 Sep. 1866; *m.* 1892, Hon. Marie Adelaide, *d.* of 1st Baron Brassey. A.D.C. to Lord Brassey when Gov. of Victoria; 1895; M.P. (L.) Hastings, 1900-1906; Bodmin, Div. of Cornwall, 1906-10; Jun. Lord of Treasury, 1906; Lord-in-Waiting to H. M. 1910-13. Governor of Bombay, 1913-19. *Heir.*: Hon. Inigo Brassey Freeman-Thomas, *b.* 25 July 1899. *Address*: Government House, Madras.

WILLIS, GEORGE HENRY, C.I.E., 1918; M.V.O. (4th) 1911 Major, R.E., M.I. Mech. E. M. I. E. (Ind.) J. P.; Master of Mint, Bombay; *b.* 21 Oct. 1875; *m.* 3.*d Educ.*: St. Paul's Sch., London; R. M. A., Woolwich. R. E., 1895; Major, 1914. Arrived India, 1900; Deputy Mint Master, 1907; officiated as Mint Master till October 1915. Bombay representatative of Indian Advisory Committee to Council of Institution of Mechanical Engineers; Member of Council, Institution of Engineers (Ind.) *Address*: H. M. Mint, Bombay.

WILSON, CHARLES HENRY, C.I.E.; Agent of Hong-Kong and Shanghai Banking Corporation, Bombay. *b.* 22 Oct. 1858. *Address*: Bombay.

WINDHAM, LT.-COL. CHARLES JOSEPH, C.I.E.; Resident in Kashmir, *b.* 1867 *m. d.* of late J. B. Starky of Spye Park, Wilts. Ent. Army, 1886; Indian Pol. Service, 1893 Pol. Officer with Ex. Amir Yakub Khan of Kabul, Resident in western States of Rajputana, 1910-18; Resident in Baroda, 1919-20; *Address*: The Residency, Kashmir.

WINN, GILBERT FRANKLYN, I.S.O.; Registrar; Home Dept., Govt. of India, since 1912; *b.* 1866. *Educ.*: Muir Central Coll., Allahabad. *Address*: Simla.

WITHERS, LIEUT. EDGAR CLEMENT, C.I.E., R.I.M.; Intelligence Officer, Persian Gulf. *Address*: Intelligence Department, Basra.

WITTET, GEORGE, F.R.I.B.A., Director, Tata Engineering Co., Ltd. *b.* 26 November 1878; Consulting Architect to the Govt. of Bombay, 1908-1919. *Address*: Dongarsi Road, Malabar Hill, Bombay

WODEHOUSE, LT.-COL. FREDERIC WILLIAM, C.I.E., I. A.; Bombay Pol. Dept., Resident, Kolhapur and Pol. Agent, S. Mahratta Country States; *b.* 7 April 1867: *Educ.*: Westminster; Sandhurst. Joined Army, 1886; *Address*: The Residency, Kolhapur.

WOOD, HON. SIR JOHN BARRY, K.C.I.E., C.S.I.; Pol. Sec., Govt. of India, since 1918; Member of Council of State (1920): *b.* 1870. *m.* 1896 Ada Elizabeth, *d.* of G. A. Stack, I.E.S. *Educ.*; Marlborough; Balliol Coll., Oxford. Ent. I.C.S., 1894, Under-Sec. to Govt. of India, Foreign Dept., 1899-1903; 1st Assist. in Baluchistan, 1903; Dy. Sec., Foreign Dept., 1906-10. Resident, Indore, 1912. *Address*: Ava Lodge, Simla.

WOOD, WALTER GUNNELL, A.M.I.C.E., C.S.I.; Prin., Thomason C.E. Coll., Roorkee, since 1916; *b.* 19 Oct. 1861, *m.* 1891 *d.* of Col. A. O. Woodhouse, T. A. *Educ.*: Wellington; R.I.E. Coll. Ent. P.W.D., 1882; Supdt. Eng., 1905; Ch. Eng. and Sec. to Govt., U. P., 1912-16. *Address*: Roorkee.

WOODROFFE, SIR JOHN GEORGE, Kt. Puisne Judge, Calcutta High Court, since 1904; *b.* 15 Dec. 1865. *Educ.*: Woburn Park; Univ. Coll., Oxford (B.C.L., M.A.). Barr., Inner Temple, 1889; Advocate, Calcutta H. C., 1890; Standing Counsel, Government of India, 1903. Judge, 1904; Offg. Ch. Justice, Bengal, Nov. 1915. *Address*: Bengal Club, Calcutta.

WOODYATT, MAJ.-GENERAL NIGEL GRESLEY, C.B. (1916), C.I.E. (1919). *b.* 30 March 1861. *m.* Florence Patterson, *e.d.* of A. B. Patterson, late I C S. *Educ.*: Shrewsbury. Entered Army, 1883. Served with Chitral Relief Force, 1895. G.O.C., Delhi, 1914-15. Conducted operations against the Bunerwals, August 1915. Commanded 3rd Infantry Bde. against the Mohmands, September and October 1915. Acting G.O.C., 6th Division, 1919. Col., 7th Gurkha Rifles.

WOOLACOTT, JOHN EVANS, Editor of *The Pioneer*. *b.* 1862. *Educ.*: Milford Haven Sch., and Gr. Sch. Menaibridge. *m.* Anjoulina, *d.* of the late A. Seneca. On staff of *Central News*: Correspondent of *The Daily Mail* in Cairo and Paris. Assistant Editor, *The Economist*: City Ed. *The Tribune*: has edited *The Statesman* and *The Bombay Gazette*. President, Institute of Journalists, 1908. Parliamentary Candidate, Glasgow, 1895. *Address*: Allahabad.

WYNDHAM, PERCY, C.I.E., C.B.E., R.G.S. Commsr., Kumaon, since 1911; *b.* 13 Dec. 1867. *Educ.*: Giggleswick Sch.; Queen's Coll., Oxford, M.A., Joined I.C.S., 1889. *Address*: Naini Tal.

YAIN, LEE AH, Bar-at-Law. *b.*; April 1874 Educ. Rangoon College and Cambridge.. *Address*: 67, Merchant Street, Rangoon.

YOUNGHUSBAND, MAJOR-GENERAL LESLIE NAPIER, C.B., 1917; C.M.G., 1918; Director of Personal Services. *s.* of late Major-General J. W. Younghusband, C.S.I.; *m.* 1898, Kathleen, *d.* of John Bott of Marden, Wilts. *Educ.*: Clifton College; R.M.C. Sandhurst. Entered Army, West, Yorkshire Regiment, 1885; appointed to Indian Staff Corps, 1887; served in Tirah, 1897-98; South African War; European War; Brevet-Colonel, 1916. *Address*: Army Head-quarters, India.

YULE, SIR DAVID, Kt. (1912), Partner, Messrs. Andrew Yule & Co. *b.* 4 Aug. 1858. *m.* Annie Henrietta Yule, *d.* of late Andrew Yule. *Educ.*: R. High School, Edinburgh. Joined firm of Andrew Yule & Co., Calcutta, 1875. *Address*: 8, Clive Row, Calcutta.

The Moplah Rebellion.

The Moplah insurrection on the west coast of Madras aroused public attention to a degree unknown in the past. The outrages recorded have not however been wholly unparalleled in the history of the Malabar district. From 1796 to 1809, just after the occupation of the West Coast by the East India Company's troops, guerilla warfare was carried on by the Hindu peasantry with whom were associated the Moplahs. Sir Arthur Wellesley (the Duke of Wellington) took part in the suppression of the rebellion. From 1836 onwards to the present day local unrest among the Moplahs has been a chronic feature of Malabar history. During the intervening years between 1809 and 1836 the powerful castes of Hindu landlords had settled down, with their rights in the land completely acknowledged, to the detriment, it is feared, of the prosperity of their tenants, who included a very substantial number of Moplahs.

The Moplahs:—The Moplahs are Moslems of a fanatical type, as different in their own way from the ordinary Indian Mahommedan as the tribes of the North-West. They claim to be descendants of Arab ancestors. It is probable that they are the descendents of converts made by Arab merchant sailors and military adventures; some at least of them have a strain of Arab blood. Malabar, and, indeed, the South-West Coast, was for centuries the gateway for foreign trade—even, it is believed, from the time of King Solomon. Coins of the Roman Emperors have been found in the region, and the Jews have an ancient synagogue preserved to this day in Cochin. Arab, Portuguese, Dutch, French, and Danish settlements in turn were established, and in some cases exist still as vestiges of the maritime power of those nations.

The Country:—The Moplahs mainly inhabit the civil districts of Malabar and South Canara; they overflow into the mountain district of the Nilgiris and the native states of Cochin, but they are concentrated in the two Taluks of Ernad and Walavanad in the Malabar district, where out of a population of 3,000,000 they number 1,000,000. They are tenant farmers, sailors and ferrymen on the backwaters and rivers which traverse the district. Large numbers of Moplahs migrate as labourers to rubber and other plantations; they are generally appreciated as very good workers, and command substantial wages for their services. Vigorous in action, possessing great physical courage, reckless when under the excitement of passion they retain to this day the characteristics of their seafaring piratical ancestors. Their fanaticism is only equalled by their ignorance; only one out of every ten males possesses even the rudiments of education—the census of 1911 records only 500 out of half a million who returned themselves as literate in English. The physical inaccessibility of Malabar has, indeed, kept all its communities out of the general stream of developing life in India, and it is only in recent years that the most literate Hindu classes have been affected by this new outer world. The Moplah, however, has an outer world, and that is the world of Islam. He is shut off from the rest of India by the great mountain range of the Nilgiris, which runs parallel to the sea coast at an average distance of some 50 miles, and his real world is the Indian Ocean and the Moslem countries whose shores it laps. His community for centuries has been a Mahomedan outpost of the Middle East, even as his neighbours, the Syrian Christians of Travancore have been an outpost of the Eastern Church. In 1857 the Indian Mutiny had its reflection in a wave of religious fanaticism which passed over this distant community, and again in 1885 the Mahdist movement in Egypt was one of the causes, if not an important cause, of the rebellion of that year.

In 1880 a British member of the Indian Civil Service was deputed to inquire into the chronic unrest of the Moplah community, and he reported that trouble was due to certain causes, among which were: (*a*) The existence of the precarious tenant right by which the Moplah held his lands, (*b*) the difficulty he experienced in acquiring sites for mosques and burial grounds. This chronic unrest flares into open rebellion when fed by religious propaganda.

The Outbreak—Early in 1921 the Khilafat movement workers, which included Hindu non-co-operators, visited Malabar and, in spite of local warnings, insisted on holding meetings, though some of them were prohibited by the authorities, and a prominent Mahomedan leader was arrested and imprisoned for infraction of police regulations. In June reports were received of voluntary local organisations which carried on their propaganda in secret. In this month the police arrested a Moplah who was charged with breaking into a landlord's house. The action of the police nearly led to a riot, which was, however, averted. On August 21 the police sought to arrest certain Moplah criminals at Tirurangadi, a Moplah religious stronghold. After effecting these arrests in the early forenoon the police forces were unsuccessfully attacked that afternoon by armed bands. Two police officers were killed. In the meantime armed mobs appeared on several of the neighbouring main roads, and forces were sent out to disperse them, the railway lines were cut in various places, and a station was completely wrecked. In fact, the three taluks of the district of Malabar were completely overpowered by Moplah rebels. Many Hindus, especially those of the land class, were murdered, and others of the lower castes have been forcibly converted to Islam; some Europeans, particularly police and military officers and planters, have been killed. Property was looted and, what is most serious in a country such as India which is entirely dependent on its crops, agricultural operations have been suspended owing to the lawless condition of the countryside, and the district is to-day faced with famine.

Suppression:—Martial law was immediately proclaimed in Malabar and on August 26 a fierce encounter took place at Podakuttur between a company of British soldiers and a Moplah mob who were armed with guns, swords, and war knives. The rebels were finally dis-

persed after a battle which lasted for five hours, having lost, it is reported, 400 men killed. By the middle of September the situation was well in hand, and by the end of the year only a few gangs were unbroken. The problem, however, with which the administration is faced is to restore the Hindu refugees to their homes, and to tide over the period of inevitable famine. The task is a very heavy one. The Malabar district consists of a narrow littoral intersected by numerous rivers which, by tide pressure, form backwaters; by spurs from the low foot hills, covered with impenetrable bush, which run almost to the sea, thus making communications even more difficult; of uplands with deep ravines, backed by the high range of mountains already referred to. The uncultivated lands are covered with almost impenetrable tropical forests, and it will need adequate forces; adequate to give protection to the peaceful Hindu cultivator against the depredation of roving bands, and also to reduce these bands to submission by blockade. Some of the leaders proclaimed their independence as local kings, levied blackmail on the Hindu population, and flaunted the ascriptions of royalty even to the establishment of law courts and the issue of currency notes.

The Casualties'—The Home Member informed the Legislative assembly in January 1922 that the number of forced conversions of Hindu, according to the Madras Government, ran into thousands. The military expenditure incurred by the Government was over 15 lakhs. The question of a grant or compensation to those who suffered at the hands of the rebels was now engaging the Madras Government's attention.

So far 2,250 Moplahs had been killed and 5,727 sentenced to various terms of imprisonment by the Summary Courts. The total figures of those sentenced by all kinds of Courts was not available.

The Train Tragedy'—The military operations, which were conducted with efficiency and care, were clouded by what is known as the Tiam Tragedy. The facts were let out in the following official communications on Nov. 21:—

"Government much regret to announce that they have received a report that of a party of 100 convicted prisoners who were entrained at Tirur, 56 were found dead of asphyxiation at Podanur. Others received adequate medical attention immediately on arrival at Podanur. Eight have since died and the remaining are reported to be likely to recover.

"Government have instructed Mr. A. R. Knapp, Special Commissioner for Malabar Affairs, to make immediately a full enquiry into this most deplorable occurrence and to spare no pains fully to elucidate the circumstances which resulted in this terrible loss of life and suffering."

The Committee has not yet reported (2—2—22.)

The Calendars.

A full Calendar will be found at the beginning of this book. Below are given details of the other Calendars in use in India.

The *Jewish* Calendar is in accordance with the system arranged A.D. 358. The Calendar dates from the Creation, which is fixed as 3,760 years and 3 months before the beginning of the Christian Era; the year is Luni-solar.

The *Mohammedan*, or era of the Hejira, dates from the day after Mahomet's flight from Mecca, which occurred on the night of July 15, 622 A.D. The months are Lunar.

The *Fasli* year was derived from a combination of the Hejira and Samvat years by the order of Akbar; it is Luni-solar. The *Bengali* year seems also to have been related at one time to the Hejira, but the fact of its being Solar made it lose 11 days each year.

The *Samvat* era dates from 57 B.C., and is Luni-solar. The months are divided into two fortnights—*sudi*, or bright, and *badi*, or dark. Each fortnight contains 15 tithis, which furnish the dates of the civil days given in our calendars.

PUBLIC HOLIDAYS IN 1922.

Parsee (Shehenshahi).

Jamshedi Naoroz	March	21
Avan Jashan	April	17
Adar Jashan	May	16
Zarthost-no-diso	June	17
Gatha Gahambars	September	7
	"	8
Parsee New Year	"	9
	"	10
Khordad Sal	"	15

Parsee (Kadmi).

Avan Jashan	March	18
Jamshedi Naoroz	"	21
Adar Jashan	April	16
Zarthost-no-diso	May	18
Gatha Gahambars	August	8 & 9
Parsee New Year	"	10 & 11
Khordad Sal	"	16

Mahomedan (Sunni).

Shab-e-Barat	April	13
Ramzan'Id	May	30
Ashura	September	2
Mohurrum	"	3
Bara Wafat	November	3
Mahim Fair	December	4

Mahomedan (Shiah).

Shahadat-i-Huzrat Ali	May	10
Ramzan-Id	"	30
Bakri-Id	August	4
Ashura	September	2
Mohurrum	"	3
Shahadat-e-Imam Hassan	October	19
Id-e-Moulud	November	8

Hindu.

Makar Sankrant	January	14
Maha Shivratri	February	24
Holi (2nd Day)	March	14
Ramnavami	April	6
Cocoanut Day	August	7
Gokul Ashtami	"	15
Ganesh Chaturthi	"	26
Dassera	September	30
Divali	October	19
	"	20
	"	21

Jewish.

Pesach	April	13
	"	19
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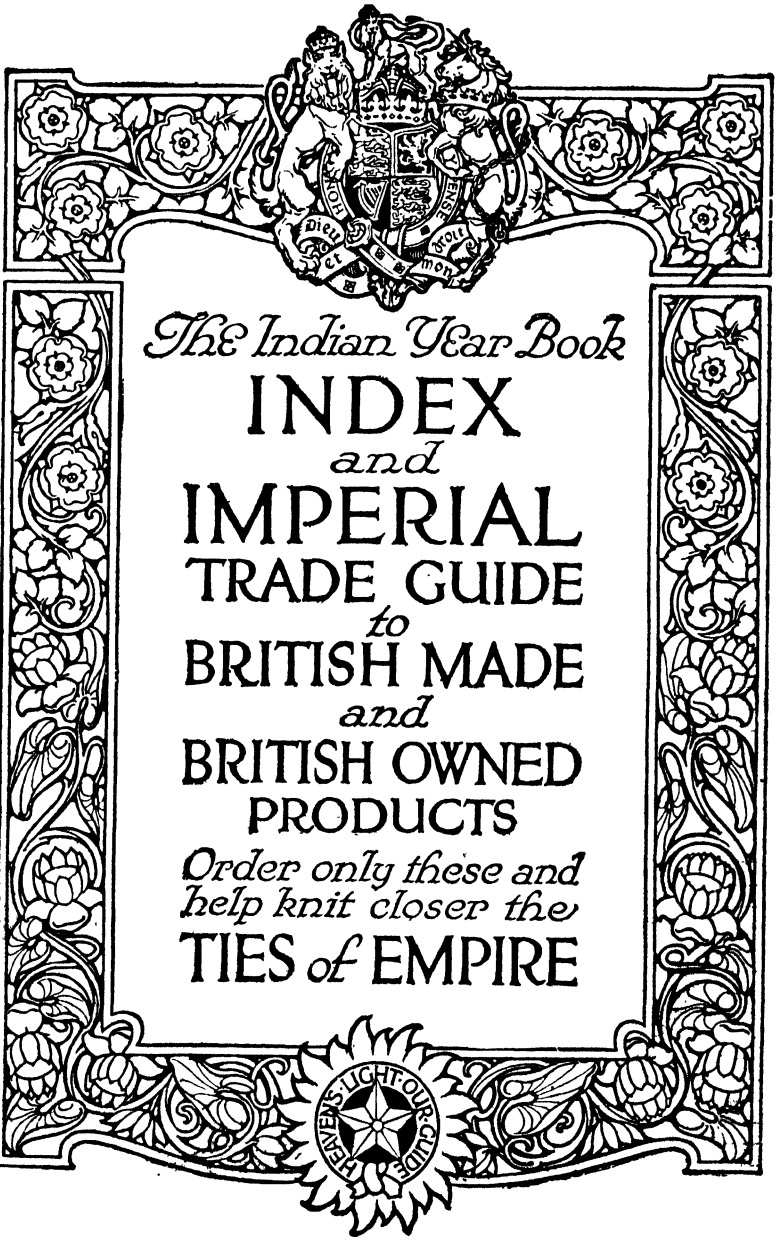

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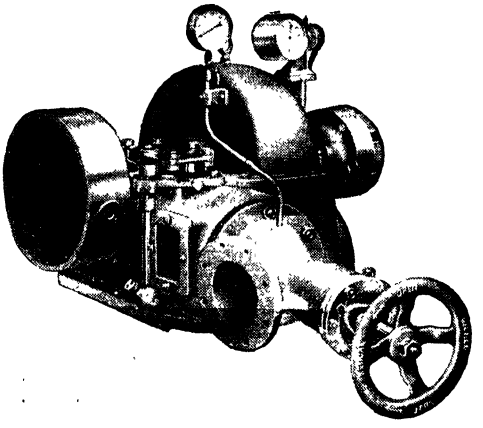

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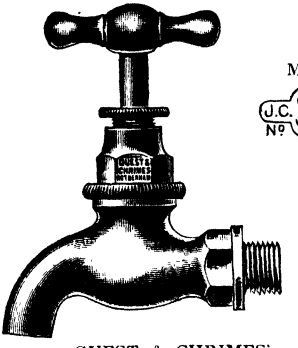

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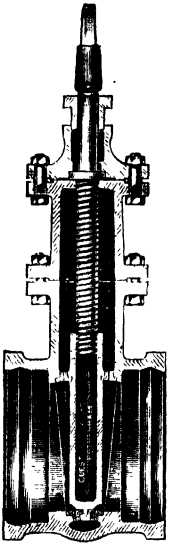

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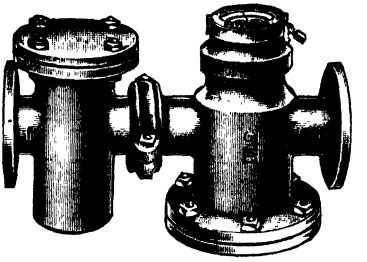

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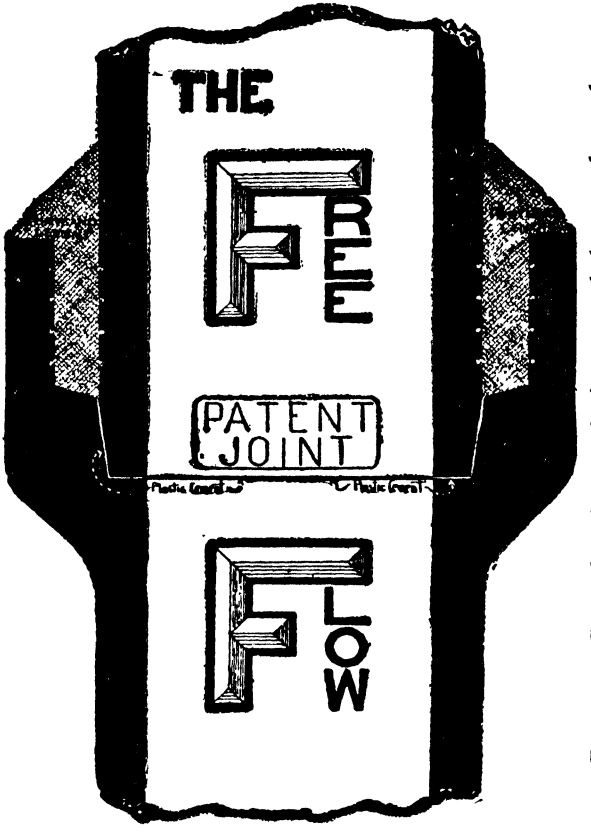

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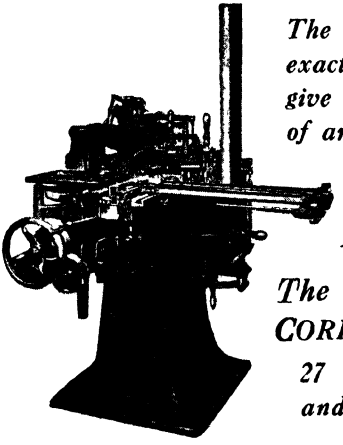

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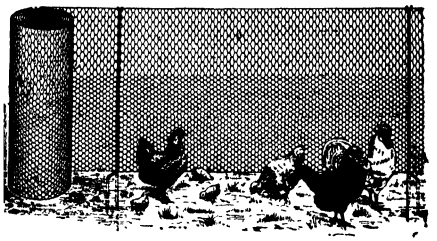

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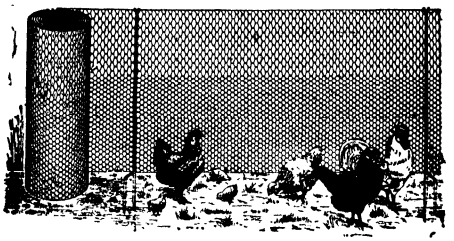

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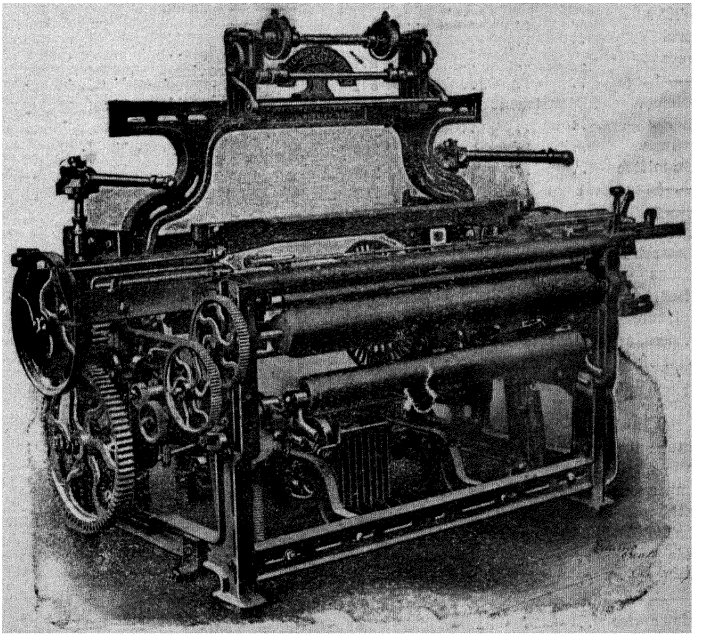

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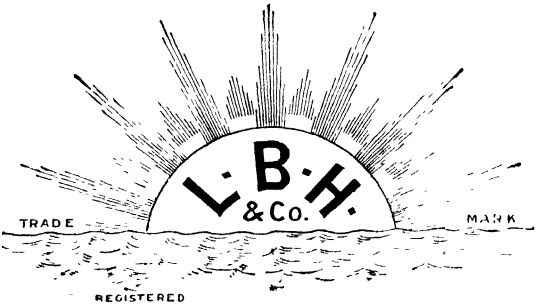

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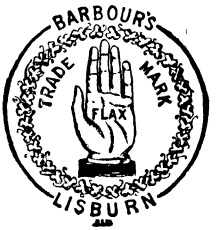

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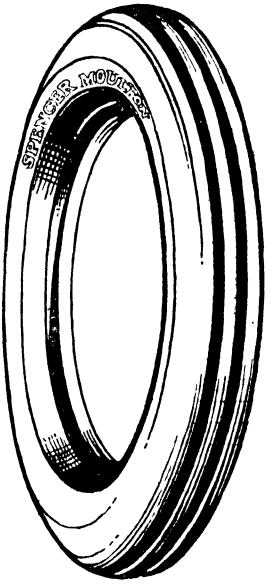

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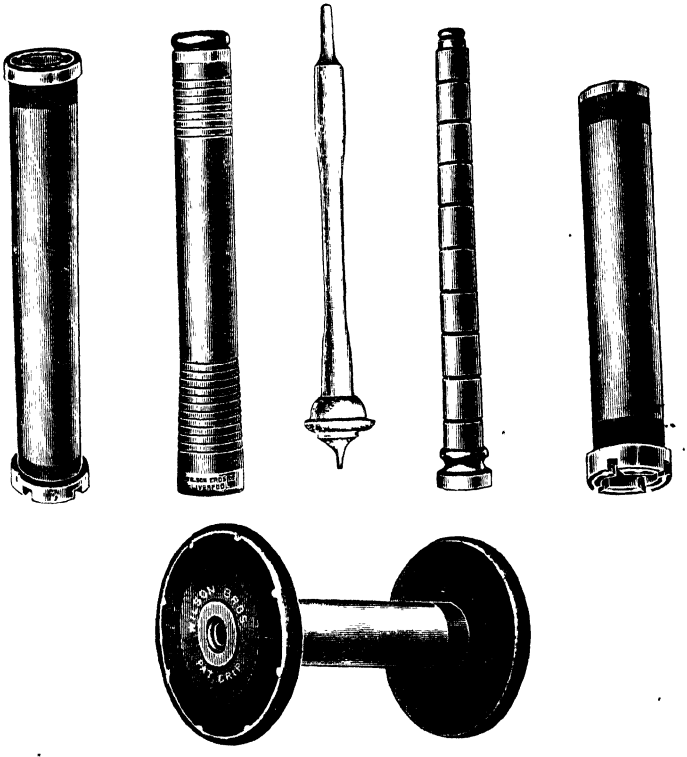

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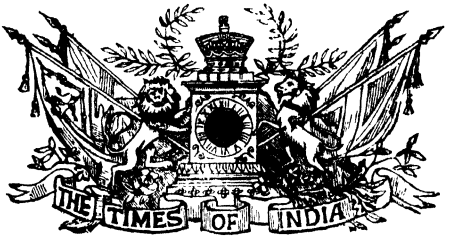

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