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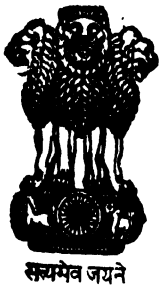
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GOVERNMENT OF INDIA

MINISTRY OF RAILWAYS

(RAILWAY BOARD)

Report by the Railway Board

ON

INDIAN RAILWAYS

FOR

1957-8

Volume I

PUBLISHED BY THE MANAGER OF PUBLICATIONS, DELHI.
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1959

PRINCIPAL STATISTICS OF RAILWAY OPERATIONS*

I.—All Indian Railways (including Non-Government Railways)

Items	1952-3	1953-4	1954-5	1955-6	1956-7	1957-8
Capital at charge (crores) Rs.	868·55	878·46	910·91	975·49	1,078·23	1,228·64
Route mileage as on 31 March	34,274·98	34,405·58	34,705·16	34,736·60	34,744·05	34,888·87
Gross earnings (crores) Rs.†§	272·28	272·81	288·59	317·51	350·55	382·99
Total working expenses (crores) Rs.§	219·99	232·02	235·99	260·17	280·13	311·16
Operating ratio (per cent)	80·79	85·05	81·77	81·94	79·91	81·24
Number of passengers originating (million)	1,212·09	1,220·40	1,260·89	1,297·36	1,382·54	1,451·06
Passenger miles (million)	37,396·27	37,548·57	38,649·31	39,083·29	42,194·47	43,352·80
Earnings from carriage of passengers (crores) Rs.	101·83	101·35	103·74	108·75	117·39	120·08
Average earnings per passenger mile, Pies	5·23	5·18	5·15	5·34	5·34	5·32
Freight tons originating (million)	98·37	99·36	106·98	115·27	125·38	133·37
Freight ton miles (million)	28,961·46	29,567·52	32,126·14	36,471·85	40,224·69	44,567·44
Earnings from carriage of goods (crores) Rs.§	143·81	145·39	156 45	177 92	201·09	225·72
Average earnings per freight ton mile, Pies	11·2	11·3	11·1	11·1	11·3	11·4
Total train miles (million)	191·34	194·81	201·05	209·50	217·82‡	226·96
Gross earnings per train mile, Rs.	15·0	14·8	15·2	16·0	17·0	18·0
Working expenses per train mile, Rs.	12·2	12·6	12·5	13·2	13·8	14·8
Net earnings per train mile, Rs.	2·80	2·19	2·62	2·75	3·24	3·19
Net earnings per mean mile worked, Rs.	15,677	12,447	15,231	16,483	20,238	20,645

II.—Indian Government Railways**

Items	1952-3	1953-4	1954-5	1955-6	1956-7	1957-8
Capital at charge @ (crores) Rs.	833·06	843 33	872·98	929 31	1,033 02	1,169·13
Route mileage as on 31 March	33,518·98	33,852·15	34,151·73	34,182·17	34,190 81	34,461·88
Gross earnings (crores) Rs.†§	270·09	270·75	286·89	315 91	348·89	381·42
Total working expenses (crores) Rs.§	218 16	230·18	234·50	258·84	278·76(d)	309·76
Operating ratio (per cent)	80·77	85·02	81·74	81·93	79 90	81·21
Number of passengers originating (million)	1,185·66	1,193 58	1,236·18	1,275·28	1,359 68	1,410·18
Passenger miles (million)	36,928·32	37,095·65	38,516 09	38,733 00	41 878 33	43,042·93
Earnings from carriage of passengers (crores) Rs.	100·38	99·92	102·62	107·71	116 33‡	119·10
Average earnings per passenger mile, Pies	5·22	5·17	5 14	5·33	5·33	5·31
Freight tons originating (million)	97·12	98 14	105·81	114 05	124·07	132·08
Freight ton miles (million)	28,905·78	29,510·40	32,089·98	36,434·00	40,185·78	44,861·39
Earnings from carriage of goods (crores) Rs.§	143·19	144·77	155·95	177·43	200·58	225·20
Average earnings per freight ton mile, Pies	11·1	11 3	11 1	11 0	11 3	11·4
Total train miles (million)	188·54	191 95	198 62	207·24	215·52‡	224·76
Gross earnings per train mile, Rs.	15·1	14 9	15·2	16·1	17·1	18·1
Working expenses per train mile, Rs.	12·3	12·7	12·6	13·3	13·8	14·9
Net earnings per train mile, Rs.	2·83	2·20	2·64	2·77	3·26	3·21
Net earnings per mean mile worked, Rs.	15,919	12,578	15,415	16,621	20,414	20,848

* Attention is drawn to the fact that the figures quoted in the two tables appearing on this page differ in certain cases from the figures presented in the text of the Report. For an explanation of these differences see paragraph 7 of the Introductory Note.

† Include earnings from Marmugao Harbour up to 1955-6 and exclude suspense.

‡Revised figures.

§ The figures of earnings and expenses of Government Railways in the tables above are exclusive of the freight charges on the carriage of Railway stores and fuel which during 1952-3 and 1953-4 were treated as free hauled traffic but commencing from 1 April 1954, the freight charges on this account are taken in reduction of operating expenses instead of being credited to earnings.

** Include statistics of worked lines.

@ Excludes the capital-at-charge of miscellaneous projects, such as the Chittaranjan Locomotive Works, Integral Coach Factory, Ganga Bridge Project, Calcutta Electrification Project, etc.

(d) Excludes Rs. 71 thousands incurred under the head Repairs and Maintenance by the Calcutta Electrification Project.

INTRODUCTORY NOTE

1. The Railway Board's Annual Report on Indian Railways relates to the financial year, i.e., from 1 April of one year to 31 March of the year following.

Volume I is a narrative report dealing with the various aspects of railway working, such as general administration, financial results, improvements in and additions to rolling-stock, commercial and operating methods, recruitment, training and welfare of staff, and facilities provided for the convenience of the travelling public.

Volume II contains financial and statistical summaries and statements covering the main heads of capital and revenue accounts and all other aspects of railway working.

2. With effect from 15 January 1958, the North Eastern Railway was bifurcated into two zones. The *ex* Pandu Region with the exception of a few branch lines has been formed into a separate independent unit called the Northeast Frontier Railway with headquarters at Pandu. The remaining portions of the old North Eastern Railway have been constituted into the new North Eastern Railway with headquarters at Gorakhpur. Where separate figures for the two units were available these have been indicated, in other cases the information against North Eastern Railway relates to both North Eastern and Northeast Frontier Railways as it stood prior to bifurcation.

3. With effect from 1 April 1954 as a result of a change in accounting procedure on Government Railways, freight charges on the carriage of railway stores and fuel are reflected in the accounts of the spending departments concerned and instead of being credited to earnings, these charges are taken in reduction of operating expenses. However, for the purpose of working out the derivative statistical results such as earnings and expenses per train mile, per vehicle/wagon mile or per ton mile, etc., these freight charges are included as earnings and the corresponding 'deduct' entry in the working expenses ignored.

4. With effect from 1 July 1957, the supplementary charge on freight traffic (both goods and Coaching) except a few items has been raised from $6\frac{1}{4}$ per cent to $12\frac{1}{2}$ per cent. Other changes in freight rates introduced during the year are given in detail in Chapter III-B.

5. For statistical purposes, Indian Railways are classified as follows with effect from 1 April 1952:

(i) Government Railways, and
(ii) Non-Government Railways.

The details of the railways falling under each category are shown in Appendix D of this volume.

6. For the information of those not conversant with the value of Indian currency and the units thereof, the following details are given:

(*a*) One *lakh* equals one hundred thousand ;
(*b*) One *crore* equals one hundred lakhs or ten millions ;
(*c*) One *anna* equal 1/16th of a rupee ;
(*d*) One *pie* equals 1/12th of an anna.

The approximate value in English coinage of a rupee at the present rate of exchange is one silling and six pence.

7. Financial statistics shown under principal statistics of railway operation and in the following chapters differ according to the inclusion or exclusion of certain items. In the principal statistics financial figures include the earnings from the Marmugao Harbour upto the year 1955-6 and exclude suspense.

In Chapter II, dealing with financial results of Indian Railways, reference is made to gross traffic receipts, etc. *Gross traffic receipts* include, while *Gross earnings* exclude, *suspense*.

Goods earnings include earnings from demurrage, wharfage, etc., while earnings from 'carriage of goods' referred to under the principal statistics of railway operation exclude these items.

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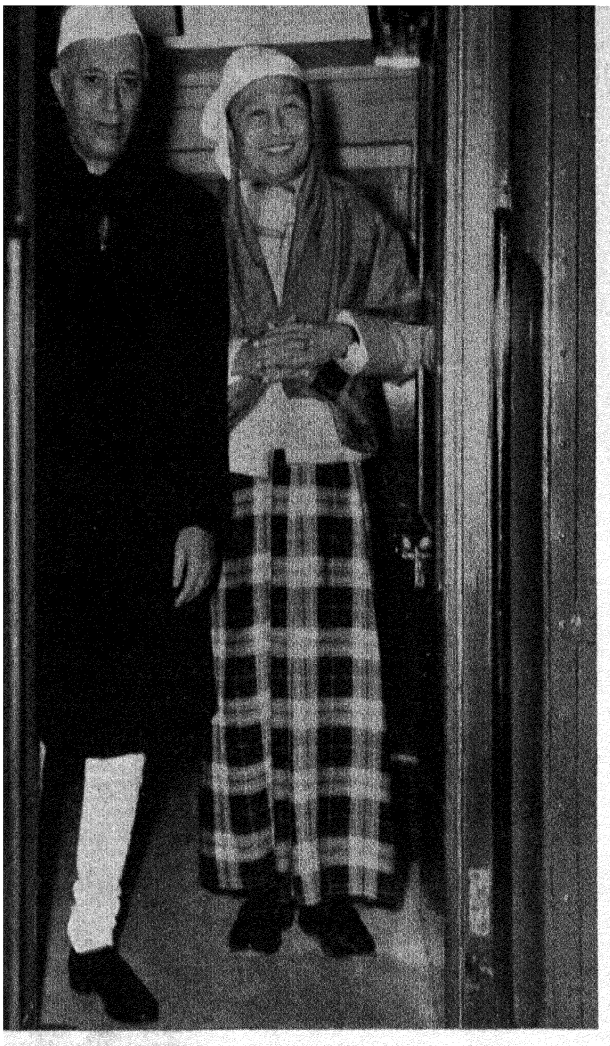
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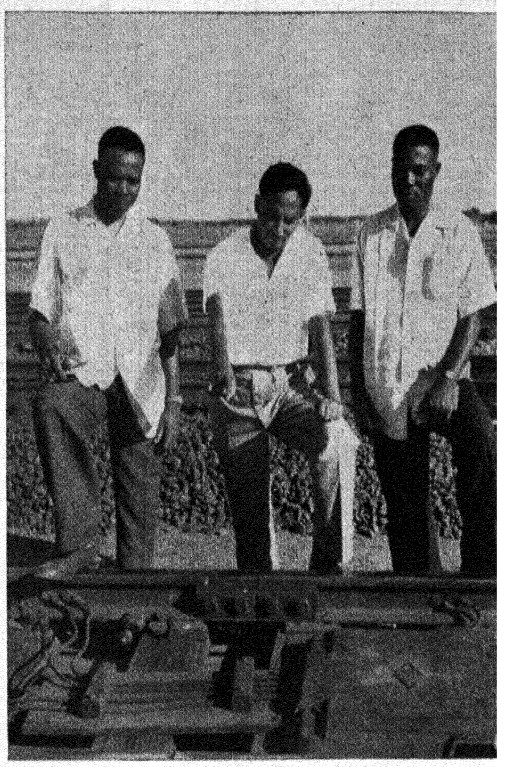
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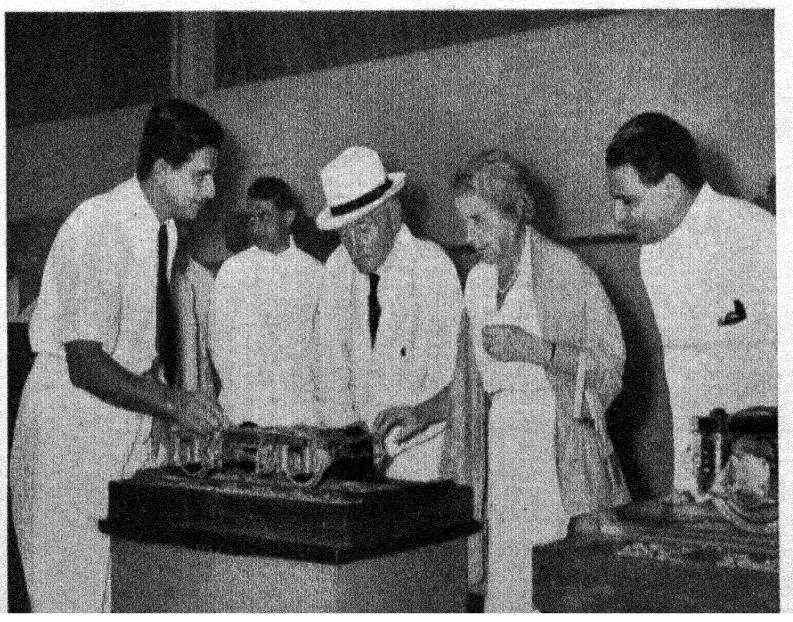


PRIME MINISTERS OF INDIA AND BURMA AT JRKELA RAILWAY STATION DURING THEIR VISIT TO NEW STEEL PLANT IN DECEMBER, 1957—SOUTH EASTERN RAILWAY



RAILWAY MEN FROM GHANA AND BRITISH EAST AFRICA UNDERGOING TRAINING—SOUTHERN RAILWAY

LORD AND LADY PETHICK LAWRENCE FROM THE U.K. VISITING THE FACTORY—INTEGRAL COACH FACTORY



CHAPTER I

GENERAL

1. General features of the year.—The gross earnings of the Indian Railways reached the figure of Rs. 382.99* crores during 1957-8. Improvement has been reflected in several aspects of performance and fresh records established in the matter of number of passengers originating, passenger miles, tonnage of goods traffic originating and ton miles, net ton miles per wagon day, loads of goods trains and net ton miles per goods train hour.

This was the second year of the Second Five Year Plan which, however, witnessed an accentuation of some of the conspicuous stresses and strains to which the Indian economy has been subjected in recent years on account of the high tempo of activity in pursuance of the Plan. While the rate of development outlay in the public sector registered a substantial increase from Rs. 635 crores in 1956-7 to Rs. 861 crores in 1957-8, the rate of investment in the private sector tended to decline somewhat, mainly on account of the import cuts. Agricultural output was also disappointing in the 1957-8 season and the total foodgrains production amounted to only 62.0 million tons as against 68.7 million tons in 1956-7. As regards commercial crops, cotton production recorded a negligible increase. Production of sugarcane, jute and mesta declined during 1957-8 compared with the previous season. Under the group 'oil seeds', the small increase of 1.69 per cent in groundnut was completely offset by heavy decreases under the other items, *viz.*, castorseed, sesamum, rape and mustard and linseed. Production of tea during 1957 was also below the level of the preceding year. With a view to augmenting supplies of foodgrains, imports of cereals were stepped up.

The rising trend of industrial production was maintained generally. The rate of growth, however, diminished towards the latter half of the year. The general index of industrial production, taking 1951 as the base year, increased from 132.6 in 1956 to 137.2 in 1957, representing an increase of only 3.5 per cent as against an increase of about 8.6 per cent in 1956 over 1955. The slowing down in the tempo of industrial production as a whole was due to various factors, particularly, shortage of raw materials following the import cuts as well as a slackening of demand in certain sectors of industry, notably cotton textiles. Accumulation of stocks with mills led to curtailment of cloth production. The level of production in the metal products group remained unchanged. Steel output amounted to 1.35 million tons in 1957 as compared to 1.34 million tons in 1956. Production of coal showed a rise of 4.1 million tons to 43.5 million tons in 1957. The output of cement increased from 4.9 million tons in 1956 to 5.6 million tons in 1957. In the chemical group, significant increases were recorded in the output of superphosphate, sulphuric acid, and caustic soda. There was an overall increase in the production of all pharmaceuticals and drugs, insecticides, aromatic chemicals, essential oils and dyestuffs. Production of salt reached a record level of 98.3 million maunds in 1957 as against 88.9 million maunds during 1956. A feature of the industrial growth in 1957 was the significant rise in the output of heavy and light industrial machinery and machine tools. The output of machinery industry—textiles, jute and sugar—went up. Yet another feature was the manufacture for the first time in the country of as many as 19 new items in the engineering group and 17 new items in the chemical group.

There has been an overall increase in the value of imports and exports during 1957-8 as compared with the previous year. The foreign trade of

* Inclusive of non-Government Railways.

India was, however, characterized by a decline in imports on private account as a result of control measures, and an unencouraging performance in exports. Imports of iron and steel on private account recorded the sharpest decline, but the fall here was compensated by larger imports of this commodity by the public sector. Imports of consumer goods and raw materials on private account showed a substantial contraction. There was, on the contrary, a 70 per cent increase in the public sector's imports, mainly as a result of larger imports of foodgrains, machinery and equipment, iron and steel, defence stores and other items. While the exports of manganese ores, cashew kernel and groundnuts showed increases, the value of exports of staple commodities like tea, jute manufactures, cotton manufactures, raw cotton and vegetable oils recorded decreases.

These stresses and strains in the economic activity of the country naturally affected the operations and traffic earnings of the Railways, more particularly in the last quarter of the year 1957-8. However, despite these set-backs the volume of traffic handled and earnings of the Railways for the year touched higher level and established fresh records. The number of passengers originating, passenger miles, tonnage originating and ton miles set up new records. The increase in goods earnings is attributable partly to the increased volume of traffic handled and partly to the increase in the supplementary charge on freight traffic, from 1 July 1957. The improvement under passenger earnings is the reflection of the increased volume of traffic handled.

Several indices of operation like net ton miles per wagon day, loads of goods trains, and net ton miles per goods train hour have touched fresh levels on both the Broad and Metre gauges, while wagon miles per wagon day and punctuality also improved on the metre gauge. The fuel consumption ratio also disclosed an improvement on both the gauges. There was, on the other hand, a slight deterioration in the speed of goods trains on both the gauges and a recession in the standard of punctuality on the Broad gauge. But for these set-backs, the standard of performance during 1957-8 would have reflected a much higher rate of improvement.

2. General Review of working.—Gross earnings* of all Indian Railways for the year 1957-8, including non-Government Railways, amounted to Rs. 382.99 crores as against Rs. 350.55 crores for the year 1956-7. As compared with the previous year the earnings from passengers carried increased by Rs. 2.69 crores or 2.29 per cent. and earnings from goods carried by Rs. 24.63 crores or 12.2 per cent in 1957-8.

The gross traffic receipts* of Government Railways amounted to Rs. 379.78 crores. After meeting all charges, including depreciation amounting to Rs. 46.23† crores but excluding interest charges, the net revenue on the results of working for the year amounted to Rs. 57.78 crores. In accordance with the terms of the Railway Convention, an amount of Rs. 44.40 crores was paid as representing the dividend on the capital invested out of the general revenues in the railway undertaking, excepting the strategic lines. The surplus for the year amounted to Rs. 13.38 crores as against Rs. 20.22 crores in 1956-7.

* Gross traffic receipts *include* while Gross earnings *exclude Suspense.*

† Rs. 1,23 lakhs are chargeable to the manufacturing suspense (capital) being depreciation on capital assets of Chittaranjan Locomotive Works (1,06 lakhs) and Integral Coach Factory (17 lakhs) as explained in Chapter II.

Certain important statistics relating to the traffic handled during 1957-8 as compared with 1956-7 for all railways are given below:

PRINCIPAL STATISTICS OF WORKING OF INDIAN RAILWAYS (INCLUDING NON-GOVERNMENT RAILWAYS)

Items		1956-7	1957-8	Percentage Inc. (+) or Dec. (—) over 1956-7
Number of passengers originating	(millions)	1,382·5	1,431·1	+3·51
Passenger miles	(millions)	42,194·5	43,332·8	+2·70
Earnings from passengers	(crores) Rs.	1,17·39	1,20·08	+2·29
Average amount earned per passenger per mile	(Pies)	5·34	5·32	—0·37
Average length of passenger journey	(Miles)	30·5	30·3	—0·66
Freight tons originating	(millions)	1,25·4	1,33·4	+6·37
(*a*) Revenue-earning traffic	(millions)	98·3	102·8	+4·54
(*b*) Non-revenue traffic	(millions)	27·1	30·6	+13·0
Net ton miles	(millions)	40,225	44,897	+11·6
(*a*) Revenue-earning traffic	(millions)	34,075	37,976	+11·4
(*b*) Non-revenue traffic	(millions)	6,146	6,921	+12·6
Earnings from revenue-earning tonnage	(crores) Rs.	2,01·09	2,25·72	+12·2
Average amount earned per revenue-earning ton per mile	(Pies)	11·3	11·4	+0·88
Average lead of a ton of goods (both Revenue and Non-Revenue tonnage)	(Miles)	320·8	336·7	+4·96
Average lead of a ton of goods (Revenue-earning)	(Miles)	346·7	369·6	+6·61

The volume of traffic moved under passenger and goods during 1957-8 was more than in 1956-7, although not to the extent anticipated. Passenger miles during the year stood at 2.70 per cent higher than in the previous year while the net ton miles increased by 11.6 per cent. The average lead of passengers decreased from 30.5 miles in 1956-7 to 30.3 miles in 1957-8 but the average haul of a ton of goods increased from 320.8 miles in 1956-7 to 336.7 miles in 1957-8.

There has been an increase in the number of passengers originating as well as passenger miles on both suburban and non-suburban sections in all classes except Second class.

The position on Government Railways has been that the number of passengers originating and passenger miles increased from 1,360 to 1,410 million and from 41,878 to 43,043 million respectively. The volume of passenger traffic in terms of passenger miles recorded increases under all classes except the Second class which showed decreases of 1.73 and 15.5 per cent under Mail and Ordinary respectively. This is due to the policy of gradual withdrawal of Second class accommodation from passenger trains on Indian Railways with a view to reduce the number of classes of travel. It may, however, be mentioned that during the latter half of the year 1957-8, a decline was recorded in passenger traffic, particularly in long distance travel and also a shift from Mail and Express trains to Ordinary trains in the Third class.

The total volume of goods traffic inclusive of non-revenue traffic on Government Railways stated in terms of net ton miles recorded during the year an increase of 11.6 per cent over the previous year. The increase in revenue earning and non-revenue traffic amounted to 11.5 and 12.6 per cent respectively. The analysis of the traffic according to principal commodity

groups during the year as compared with the previous year given below, showed a somewhat marked drop in the higher rated group 'other commodities'.

DISTRIBUTION OF TON MILEAGE UNDER PRINCIPAL COMMODITY GROUPS—(GOVERNMENT RAILWAYS).

	1956-7 Per cent	1957-8 Per cent
Rvenue-earning traffic	84·71	84·57
Coal for the public and non Government Railways	20·99	20·84
Grains	·9·25	9·92
Oil seeds	1·44	1·50
Other commodities	53·03	52·31
Non-revenue traffic	15·29	15·43
Railway coal	13·69	13·63
Railway stores and materials	1·60	1·80

Turning to the operating aspect, the Government Railways did, during the year, 7.08 million more train miles or an increase of 3.45 per cent as compared with 1956-7.

Passenger train miles increased by 2.26 per cent. As compared with 1956-7, the percentage of trains not losing time to the total declined from 77.96 to 77.63 on the Broad gauge but recorded considerable improvement from 74.49 to 80.00 on the Metre gauge. The decline on Broad gauge is mainly due to the heavy traffic moved and consequent pressure on track, bridges, yards, etc., arising out of large development works undertaken in connection with the Second Plan. There were also other operational causes, such as, engine failures, accidents, displaced crossings, engineering restrictions, etc., and excessive pulling of alarm chain apparatus and remodelling of Howrah yard in connection with the electrification of Howrah-Burdwan section.

Goods train mileage totalled 91.01 million, representing an increase of 5.08 per cent over the previous year. The average freight load hauled by each train (steam) increased on the Broad gauge by 35 tons from 554 to 589 and on the Metre gauge by 18 tons from 257 to 275.

The number of wagons loaded on the Broad gauge during 1957-8 was 5,464,531 an increase of 253,862 wagons, or 4.87 per cent over the figures for the previous year. On the Metre gauge the number loaded was 3,405,527, or 7.61 per cent more than the previous year. The mileage performed daily on an average per wagon had, however, decreased from 47.8 to 47.3 miles in 1957-8 on the Broad gauge, but on the Metre gauge it recorded an increase from 28.7 to 30.1. As compared with 1956-7 the net ton miles per wagon day recorded an increase from 570 to 586 on the Broad gauge and from 210 to 225 on the Metre gauge.

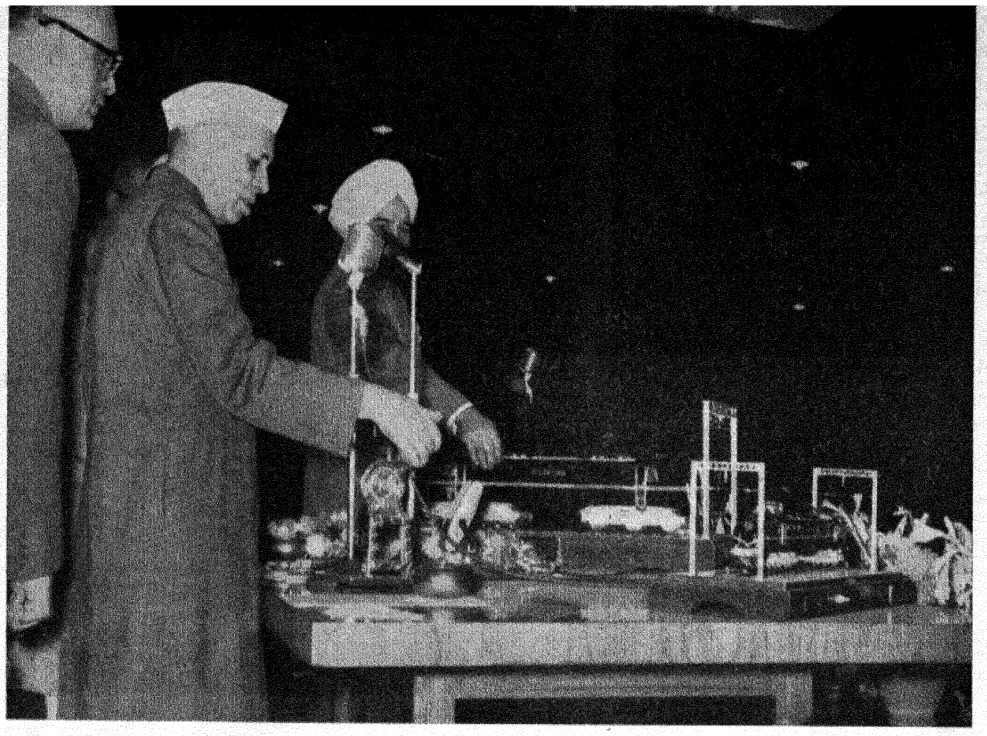
The average number of steam engines in use daily during 1957-8 rose by 3.51 per cent on the Broad gauge and 7.07 per cent on the Metre gauge as compared with 1956-7.

The percentage of engines under or awaiting repairs further declined from 15.8 to 15.3 on the Broad gauge, and from 15.9 to 15.7 on the Metre gauge during 1957-8.

Net ton miles per locomotive day on the line and in use showed increases on both the gauges.

Engine user in terms of engine miles per day per engine on line, that is, inclusive of the time under repairs, etc., has also registered a slight improvement from 83 to 84 on the Broad gauge but showed deterioration from 76 to 74 on the Metre gauge.

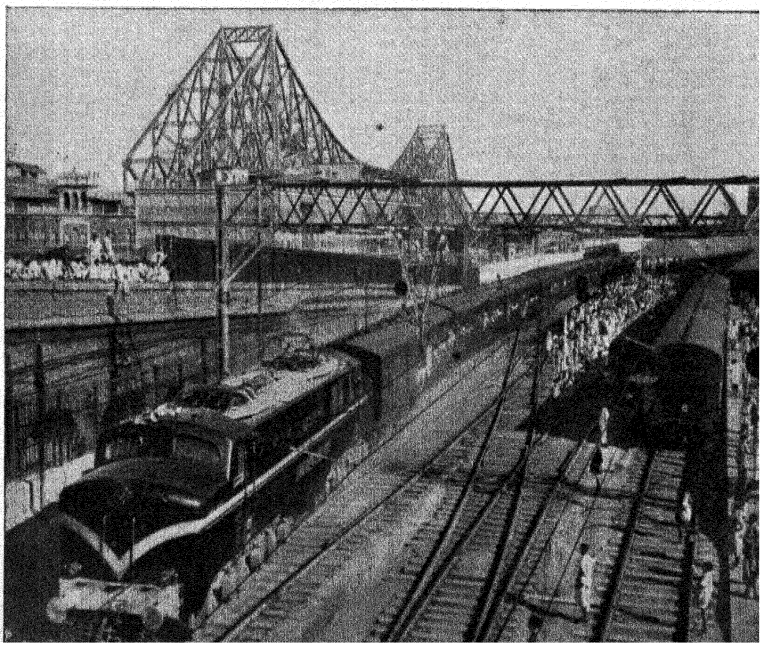
3. Second Five Year Plan.—During the year under review, the progress of implementation of Plan works has proceeded satisfactorily. The Government Railways carried 8 million more tons of freight and 50 million more passengers than in the preceding year. Increased operational efficiency, rehabilitation of depleted assets, and modernisation programme



PRIME MINISTER SHRI JAWAHAR LAL NEHRU INAUGURATING THE ELECTRIC SERVICE--EASTERN RAILWAY



PRIME MINISTER SHRI JAWAHAR LAL NEHRU GETTING INTO THE CAB OF THE ELECTRIC LOCOMOTIVE AFTER THE INAUGURATION OF ELECTRIC SERVICE FROM HOWRAH TO SHEORAPHULI—EASTERN RAILWAY



AN ELECTRIC LOCOMOTIVE GLIDING OUT FROM HOWRAH STATION ON THE MAIDEN RUN OF THE ELECTRIFIED SERVICE—EASTERN RAILWAY

have received consistent and sustained attention during the year. Some of the important achievements are narrated below:

Self-sufficiency.—The year 1957-8 saw another step in the direction of achieving self-sufficiency in the rolling stock. At Chittaranjan Locomotive Works, the production was 164 WG locomotives making a total of 320 locomotives since the commencement of Second Plan and 668 since the commencement of production in November 1950.

The production of coaches at Integral Coach Factory, Perambur, which is being equipped to manufacture in single shift 350 unfurnished coaches per annum (Phase I) by the end of the Second Plan, was 222 during the year under review making a total of 310 coaches during the Second Plan period and 322 since commecement of production in 1955.

Further there has been substantial progress in the output of wagons and coaching underframes from established wagon builders within the country. Whereas at the end of the First Plan, there was only one firm who used to supply 200 Metre gauge underframes, the present installed capacity in the country is about 20,000 wagons. Out of 29,634 wagons of all gauges placed on line during the year 1957-8, 17,216 were from indigenous sources and out of a total of 1,408 coaching vehicles, only 164 vehicles, *viz.*, 141 Broad gauge electric multiple unit coaches, 12 Broad gauge rail cars and 11 Metre gauge all-steel shells were imported. Similarly, mechanical signalling equipment is now largely made in the country and the industry has almost doubled the output in recent months. Plans have also been worked out for simultaneous development of electrical signalling equipment both in the private and public sector. Considerable developmental action is also being taken to foster manufacture in the country of miscellaneous items of equipment as are generally imported or for which sufficient capacity does not exist in the country such as track materials particularly production of rails and cast iron sleepers, train lighting equipment (*e.g.*, dynamoes, switch gear, batteries, etc.), and certain items of locomotive duplicates.

Tracks renewals.—The position regarding the supply of track fittings during the year has been generally satisfactory. A total of 2,478 track miles have been renewed, making a total of 4,416 from the commencement of the Plan period.

Bridge rehabilitation and new bridges—(a) *Ganga Bridge.*—The erection of girders of the fourth main span of this Rs. 15.61 crore project was nearly completed during the current year. Out of approximately 21 crores cft. of earthwork required, about 20 crores cft. has been completed during the year. The progress on the staff quarters and on the transhipment yard at Garhara has been satisfactory and the overall physical progress of the whole work was 65 per cent.

(b) *Brahmaputra Bridge.*—The work on the preliminaries for the Brahmaputra Bridge is progressing satisfactorily. Messrs. Hindustan Construction Co. Ltd., who had done the substructure work on the Ganga Bridge have been engaged for the execution of foundation work on this bridge also.

(c) *Gandak Bridge.*—The overall progress on the new Gandak Bridge for double Metre gauge track estimated to cost about Rs. 2.02 crores, is about 47 per cent.

Electrification.—Instead of 826 miles of electrification as originally envisaged during the Second Plan, electric traction for a total of 1,442 miles has been approved.

A controlling committee consisting of Member Engineering Railway Board as Chairman and Additional Member Finance, Additional Member Works, Director Electrical Engineering, Railway Board and General Managers, Eastern and South Eastern Railways and the Engineer-in-Chief, Main Line Electrification, Calcutta was set up to maintain a close watch on the progress of electrification on the Eastern and South Eastern Railways and to ensure that effective assistance, co-ordination and direction is available to the Engineer-in-Chief at every stage to achieve the Plan targets.

The sections from Howrah to Bandel and Sheoraphuli to Tarakeshwar, a distance of 46 miles on the Howrah Division of the Eastern Railway, was electrified during the year and electric suburban trains have been introduced in those sections.

Staff quarters and staff welfare.—During the year under review, 15,006 units of staff quarters for all classes of staff were constructed, making a total of 24,651 from the commencement of the Plan period.

New lines and restorations.—One hundred and sixty-eight miles of new lines as detailed in Chapter IV of this report were opened to traffic during the year.

Out of a total of 842 miles of new lines provided in the Second Plan, 424 miles have been approved besides 404 miles of new lines which were started during the First Plan period and are likely to be completed during the Second Plan.

Total Plan provision and actual expenditure.—The following table gives the Plan provision, and actual expenditure during 1956-7 and 1957-8:

TOTAL PLAN PROVISION AND ACTUAL EXPENDITURE 1956-7 AND 1957-8.

(Figures in crores of rupees)

Plan-Head.	Original Plan Provision	Actuals 1956-7	Actuals 1957-8
1. Rolling Stock	380	93·75*	84·38
2. Workshops and Sheds	65	3·41	4·76
3. Plant and Machinery		4·13*	4·13
4. Track renewals	100	19·41	33·66
5. Bridge works	24	0·75*	3·20
6. Ganga Bridge	9	2·38	2·33
7. Line capacity works including goods sheds	186	15·80	30·09
8. Signalling and safety works	25	1·58	2·08
9. Electrification	80	4·08	13·78
10. Staff quarters and staff welfare	50	8·13	11·03
11. Passenger and other users' amenities	15	3·91	3·24
12. New lines and restorations (including purchase of new lines)	66	8·39	13·24‡
13. Other structural works (including stores depots, training schools, other projects, etc.)	21·5	5·05	8·71
14. Investment in road services	19	1·45	0·46
15. Increase or decrease in balances under :—			
(a) (i) Stores suspense	50	18·00	30·52
(ii) Imported steel	40	**	**
(b) Manufacture suspense	..	0·64	1·11
(c) Miscellaneous advances	..	..	8·58
16. Credits or recoveries :—			
(a) Credits for released materials	..	—4·66	—4·10
(b) Other credits	..	—7·25	—0·54
Total	1121·5	178·95	250·66
Visakhapatam Port†	3·5	0·14	—
GRAND TOTAL	1125·0	179·09	250·66

* Revised.

** Included in other Plan heads.

† Transferred to the Ministry of Transport and Communications with effect from 1 October 1956.

‡ Excludes Rs. 80·47 lakhs paid for the purchase of financial interests of Salem and Tanjore District Board lines—a charge against 67-c. capital contributed by Railway Companies towards outlay on Indian Railways—Discharge of debentures.

4. Efficiency Bureau.—During the year under review, the Bureau continued to engage in studies of certain aspects of Railway working. A study of the working of eight selected departments on 4 zonal Railways (two departments on each railway) aimed at rationalisation of office work and reducing paper work of officers and staff of the Headquarter offices of the Railways was also initiated by the Bureau.

5. Divisionalization scheme on Railways.—It has been decided not to introduce major organisational changes such as the introduction of the Divisional system where it does not exist, for some time as they cause serious dislocation of work and retard the progress of the Five Year Plan. During the year, Regional Superintendents have, however, been provided at two centres of the South Eastern Railway, *viz.*, Bilaspur and Chakradharpur where operational considerations required the posting of a senior officer to co-ordinate the activities of various branches.

6. Standing Committee (Developments).—The Committee consisting of Additional Member (Mechanical) as Chairman, Director Research, Lucknow, Director Efficiency Bureau, Economic Adviser, Joint Director Standardisation (Carriage and Wagon) as Members, and Deputy Director (Traffic) Efficiency Bureau, as Secretary, continued its work of keeping in touch with new developments in railway working of other countries, as also the changing needs in the country itself by studying the current technical literature published in India and abroad. The Committee held six meetings during the year under review. In all, forty six different specific developments selected after a study of about 250 issues of 31 different technical journals and magazines published in India and abroad were examined at these meetings. Sitxeen of them, which were considered *prima facie* likely to be of use under Indian conditions, were referred to the Technical Directorates of the Railway Board for further study. The adoption of the remaining thirty was not considered feasible on Indian Railways.

7. Bifurcation of the North Eastern Railway into North Eastern and Northeast Frontier Railways.—With a view to provide the eastern-most part of India with a suitable administrative machinery competent to deal promptly and effectively with the immediate as well as long term railway problems of all kinds, it was felt that the most straightforward and smoothly workable arrangement would be to locate a full-fledged and viable Railway Administration there, with the same powers as are vested in the Zonal Railway Administrations. To achieve this end, the North Eastern Railway was bifurcated on 15 January 1958 into two separate independent units known as the North Eastern Railway with headquarters at Gorakhpur and the Northeast Frontier Railway with headquarters at Pandu. The approximate route mileage of Northeast Frontier Railway is 1,726 and that of the newly-constituted North Eastern Railway 3,075. The former railway started functioning with the jurisdiction of the old Pandu Region, with the exception of a few branch lines and the latter with the remaining portion of the North Eastern Railway.

8. Examination of the estimates of the Ministry of Railways by the Estimates Committee.—As detailed in para. 7 of last year's Report, the Estimates Committee of Parliament, after examination of the Estimates of Railway Ministry, had submitted to Parliament 15 Reports containing 645 Recommendations on the various aspects of Railway working. The views of the Ministry and action taken on 627 of these Recommendations were communicated by 31 March 1958 to the Lok Sabha Secretariat for submission to the Estimates Committee.

9. World Bank Loan.—As a result of the preliminary negotiations with the World Bank in November 1956 for a loan, a team of Consulting Engineers visited India on behalf of the World Bank in January-February 1957. This was followed by a visit to India of Dr. Basch and Mr. Wright of the Economic Staff of the World Bank, in March 1957. The final phase of the negotiations were conducted in May 1957 by a team consisting of: Financial Commissioner for Railways, Member, Transportation, Director, Railway Planning, Joint Director, Railway Stores and Joint Director, Finance.

The negotiations came to a successful conclusion on 12 July 1957, on which date the Loan Agreement for the amount of $90 million or Rs. 42·8 crores was signed between the Ambassador of India and the President of the

World Bank. The total amount of the loan for the Second Railway Project aggregating $90 million was spread over four Loans as under:

Loan No.	Country	Amount in local currency	Equivalent amount in	
			Million of Dollars	Crores of Rupees
167-IN	Japan	8,640,000,000 Yens	24·0	11·4
168-IN	U. K.	£6,825,000	19·1	9·1
169-IN	Italy	7,000,000,000 Lire	11·2	5·3
170-IN	Austria, Belgium, Japan, U. S. A., W. Germany, Yugoslavia	—	35·7	17·0
		Total	90·0	42·8

The loan became effective from 7 September 1957.

Equipment covered.—The equipment covered by the loan consists of:

Locomotives, coaches and wagons with their parts, such as boilers, underframes and wheelsets ; and steel—rails, sleepers, points and crossings.

Contracts covered.—Orders placed in 1955, 1956 and the first quarter of 1957:

Outstanding values of these orders as on 1 January 1957 in the case of U. K. and as on 1 July 1957 in the case of other countries. A few other contracts after 31 March 1957 were subsequently included to be covered by the Loan.

Other details.—The rate of interest is 5.5/8 per cent. The loans are repayable in 23 half yearly instalments commencing from 1 July 1961 and ending on 1 July 1972.

Withdrawals are made from the loans as and when payment obligations to foreign suppliers mature. Upto March 1958 a total amount of Rs. 26·39 crores was withdrawn. The closing date for the loan is 31 December 1958.

10. Other Foreign Assistance.—During the year, 1,340 Metre gauge 'MC' type wagons and 12 Broad gauge Diesel Railcars with spares were received from Australia under the Colombo Plan and rails, fishplates, etc., and pig iron, worth Rs. 4,82.65 lakhs were received under T.C.M. aid of U.S.A..

11. American Team of Surveying Engineers.—The team of Engineering Consultants of New York mentioned in para. 8 of the last year's Report completed their studies and submitted all the reports and/or recommendations required under the contract, except that due to the inability of the firm to find suitable consultants they were unable to make recommendations in regard to the following two items:

(i) The broad outlines of a more powerful steam locomotive.

(ii) The design of Centre Buffer Coupler for wagons.

Action on the reports/recommendations of the team was in progress at the end of the year.

12. Acquisition of Private Railways.—The Kalighat Falta Railway, a Narrow gauge line of 26·25 miles in length was owned by the Kalighat Falta Railway Company Limited (Managing Agents, Messrs. Mcleod and Company Limited, Calcutta) who worked it under a contract with the Government of India. Under the contract, the Government guaranteed a return of 3½ per cent per annum on the paid-up-share capital of the Company. As the Railway was running at a loss for some years, it was thought best that Government should extinguish their recurring liability (about Rs. 4 lakhs per annum)

by taking advantage of the Government's option to purchase the line on 31 March 1957, by giving the Company 12 months' previous notice. The purchase price payable to the Company amounts to Rs. 28·85 lakhs (which is provisional figure pending final closing of the Company's accounts) against which a credit of Rs. 5·20 lakhs is expected to be received from sale of the dismantled assets. After acquisitions the railway line was closed to traffic from 1 April 1957, the Government of West Bengal having already agreed to augment the road services in the area.

13. **Railways and the Legislature.**—In March 1957, the outgoing Parliament had voted 'On Account' supply for the first five months of the financial year 1957-8 and voting of demands for grants for the full year was left over to the new Parliament. The demands for grants for the full year were accordingly presented to both the Houses of Parliament on 14 May 1957. The general discussion on the Budget took place in the Lok Sabha on 21, 22 and 23 May 1957 and in the Rajya Sabha on 27 and 28 May 1957. As usual, the general discussion covered a variety of subjects, the more important of which were—prospects of the successful execution of the Railway portion of the Second Five Year Plan, levy of surcharge on goods and parcels traffic, eradication of wastage, corruption, etc., import of rolling stock and other Railway stores, construction of new lines and surveys therefor, improvement in the speed of trains, provision of more passenger amenities, rehabilitation of overaged stock, regrouping of railways, introduction of Divisional system of working, co-ordination of different modes of transport, rates and fares on hill sections, over-crowding, compensation for goods lost or damaged, improvements in operational efficiency, introduction of a uniform gauge on railways, conditions of service of railway staff, provision of staff quarters, educational facilities, redistribution of posts in the different grades, appointment of a Second Pay Commission, medical facilities for railwaymen and electrification of railways, etc.

Notice was received of 252 cut motions to discuss the general policy broadly covering similar range of subjects, including the policy of the Railway Board with regard to the recognition of trade unions, nationalisation of Light Railways, prevention of railway accidents, contribution to Railway Reserve Fund and the General Revenues, punctuality of trains, compensation to passengers involved in railway accidents, recruitment of scheduled castes, scheduled tribes and Anglo-Indians to Railway services, revision of the discipline and appeal rules, etc. One hundred and fifty one cut motions were actually moved but were all negatived after discussion.

The Railway Budget for 1958-9 was presented to both the Houses of Parliament on 17 February 1958 on which the general discussion took place on 26 February to 3 March 1958 in the Lok Sabha and on 19, 20, 25 and 26 February 1958 in the Rajya Sabha. The discussions covered a variety of subjects, the more important of which were—labour policy, railway accidents, operational efficiency, regrouping of railways and bifurcation of North Eastern Railway, divisional and district pattern of administration, increase in working expenses, staff concessions, introduction of pension scheme, nationalisation of the Light Railways, etc. Notice was received of 531 cut motions, out of which 269 cut motions were actually moved to discuss the general policy which covered a similar range of subjects including demand for introduction of new trains, electrification projects on railways, construction of new lines and road over/under bridges, catering arrangements on railways, cultural and welfare activities of railway staff, contribution to Depreciation Reserve Fund, cases of *ex* State Railway employees, etc. The cut motions were all negatived after discussions.

In both the Houses of Parliament during the year 1957-8, 1,818 questions relating to the Ministry of Railways were asked. The questions covered a wide range of topics, the more important being construction of new lines, railway accidents, punctuality, labour relations, passenger amenities, staff matters, insecurity of and damage to life and property on railways.

14. National Railway Users' Consultative Council.—During the year the National Railway Users' Consultative Council held one meeting on 20 and 21 December 1957. At this meeting important matters such as the operating position, passenger amenities, claims position, catering, ticketless travel, rail concessions, reduction in free time for loading and unloading and loading on holidays, opening of railway out-agencies, reservation of Third class seats, issue of return tickets, state of lavatories in train compartments, and scripts and regional languages to be used for station name boards, indications, time-tables and tickets were discussed.

15. Zonal and Regional/Divisional Railway Users' Consultative Committees.—During 1957-8, 106 meetings of the Zonal and Regional/Divisional Railway Users' Consultative Committees were held on all Railways and the Committees continued to render useful assistance to railway administrations in dealing with local matters affecting the interests of railway users.

16. Amenities to Passengers and other Railway Users.—The question of providing amenities for passengers and other railway users at stations and in trains continued to receive special attention during the year. The more important ones are given below:

Sleeping accommodation in Third class.—This facility provided on 7 pairs of trains, including 4 pairs of Janata trains, in the previous year was further extended to 6 more pairs of trains during the year under review. For this purpose, two different designs of the sleeper coaches are being used, one having a 3-tier arrangement and the other a 2-tier sitting-*cum*-sleeping arrangement.

Air-conditioned vestibuled train services.—In view of the lower occupation ratio of Third class air-conditioned accommodation, particularly during the cold weather, one such coach was replaced in February 1958 by three ordinary Third class coaches on all the three services namely, Delhi-Calcutta, Delhi-Bombay and Delhi-Madras, thus providing the Third class passengers with a substantially faster service than hitherto available to them.

Camping coaches.—Railways were instructed to provide at certain selected stations where no retiring rooms existed, camping coaches, to serve as residential accommodation, as an experimental measure, for the benefit of railway passengers of all classes.

Railways had also been advised to convert as camping coaches only those coaches which were no longer considered fit for train operation, amenities therein being the same as in First class carriages.

During the year under review, two camping coaches have been provided as under :

Railway	Stations at which provided	Date from which provided
	Broad gauge	
South Eastern	Puri	19 December 1957
	Metre gauge	
Northeast Frontier	Old Malda	29 March 1958

Accommodation for passengers by distance Zones.—In August 1957, it was decided that on one pair of long-distance Janata trains on each Zonal railway, arrangements should be made, on an experimental basis, for separate accommodation to be earmarked for passengers travelling over the following distances :

151 to 300 miles,
301 to 500 miles, and
over 500 miles.

The tickets sold for the three zones, 151 to 300 miles, 301 to 500 miles and over 500 miles have distinct markings on them on the reverse and a distinct one for each zone, *e.g.*, one, two or three stars respectively. Corresponding markings are made on indication boards to be placed on the carriages set aside for the various distances, so that passengers are able to

easily identify the carriages set apart for their particular zone. Markings are also provided on station platforms by means of portable stands placed at appropriate points on the platform, to indicate where exactly each type of accommodation will come to a stand. In each carriage earmarked for distances 301 to 500 miles and over 500 miles, an attendant is provided to look after the convenience of the passengers, to ensure that the compartments are regularly cleaned and watered and to arrange attention to any electrical defects, etc., in the compartments.

During the year, this facility was provided on four pairs of Janata trains on the Central, Eastern, North Eastern, Southern and Western Railways.

17. Staff.—The relations between the Railway Administration and labour were normal. The Permanent Negotiating Machinery dealt with a number of issues raised by organised labour. The machinery at the second and the third tiers resumed functioning.

During the year, as many as 248 appointments, both permanent and temporary, were made in the Gazetted Railway Services by direct recruitment and 32 permanent promotions were made from Class II and Class III services to the Superior Services.

The Railway Service Commissions selected about 37,000 persons for recruitment in Class III categories on the Railways.

During the year 543 officers received training in the Railway Staff College, Baroda.

The Railway Schools numbering 156 in all, to meet the educational needs of the children of Railway employees, continued to function satisfactorily.

For control and treatment of tuberculosis, 12 additional clinics were established bringing the total to 45. The number of T.B. beds, reserved in approved sanatoria and Railway hospitals was increased from 646 to 730. Dental clinics were provided at the headquarters of each Railway. Services of honorary consultants of eminence have also been provided on most Railways. 407 additional indoor beds were provided in Railway hospitals bringing the number to 3,950.

Orders were issued during the year removing all distinction between Class III and IV in the matter of medical attendance and treatment, and leave rules, for staff under the Liberalized Leave Rules.

Co-operative credit societies numbering 26 worked at a profit amounting to Rs. 29.72 lakhs.

The number of consumer co-operative societies rose from 110 to 120 during the year. The consumer co-operative movement is gradually, but firmly taking root in the Railways. At the end of the year there were 4 co-operative housing societies exclusively consisting of Railwaymen.

The number of canteens increased to 205 during the year. A number of canteens, previously managed otherwise, were transferred to committees of managements consisting of duly elected representatives of staff.

To enhance non-official representation and the powers of staff benefit fund committees, the composition of the staff benefit fund committees at the headquarters of each Railway was modified and recognised unions have been now given representation on the staff benefit fund committees.

Holiday homes for staff and children's camps proved to be popular. 19 camps or excursions were organised during the year. These camps are greatly appreciated by the staff and their children.

Vigilance organizations on the Railways intensified their activities during the year. As a result of departmental action, punishments were imposed in 764 cases during this year as compared to 463 cases during 1956-7. Out of this number, 162 were either dismissed or removed from service.

18. Progress of Hindi.—Progress in the gradual introduction of Hindi on Railways was satisfactory during the year under review. The preparation

of a technical terminology in Hindi was progressed in consultation with the Ministry of Education and terms pertaining to the civil and mechanical engineering departments were examined by the expert committee on Railway terms and provisional Hindi equivalents suggested. About 2,500 terms pertaining to Railways have been examined so far.

The Hindi rendering of Railway codes, manuals, tariffs, forms, etc., referred to in the previous year's report was progressed during the year. A tentative translation of the Indian Railways General Code, General Rules, Goods Tariff, the Manual of Office Procedure, Pass and P. T. O. Rules, a booklet entitled 'Railway Careers' and a pamphlet on the co-operative movement was completed. Work on the Establishment and Stores Codes, the Establishment Manual and the Coaching Tariff was in hand. The Accident (Compensation) Rules and rules regarding house-building advance were translated into Hindi and circulated to Railways.

Once again all official reports presented to Parliament at the time of the Railway Budget were brought out in Hindi as well as in English. In all, 12 such reports were published in English and Hindi simultaneously during the year.

Classes for teaching Hindi to Railway employees were instituted on some of the Railways in accordance with the Railway Board's directives issued earlier. The question of extending facilities for Hindi training of Railway staff was also considered. Railway administrations were asked to avail of the spare capacity in the Hindi centres opened by the Ministry of Home Affairs for Central Government employees in various parts of the country. In accordance with a decision taken earlier to hold Hindi examinations for Probodh, Praveen and Pragya grades for Railway staff, the first two examinations were conducted by this Ministry in July and December, 1957. 388 and 354 candidates were declared successful at these examinations respectively.

Circulars of interest to staff, news letters, important notices, notifications, etc., are already being issued in Hindi and in English and on some of the Railways in the regional language also.

Sign-boards etc., at Railway premises and in carriages when repainted or when provided for the first time will be in Hindi in Devanagari script, followed by English and the regional language. Station name-boards already show the names of stations thus, in accordance with standing instructions.

With a view to providing adequate staff to meet the growing demand for telegraphic work in Hindi, training in Hindi Morse has now been made a part of signallers' training prior to their appointment as signallers. Facilities for acceptance of paid telegrams in Hindi are now available at 8 stations on the Central Railway and 39 stations on the Northern Railway.

19. Publicity and public relations.—During the year under review, the strengthening of railway publicity and public relations continued.

In July 1957 a conference of Railway Public Relations Officers was held at Bombay, to discuss problems relating to the strengthening of publicity and public relations work on the Railways and to devise ways and means for increasing revenue from commercial advertising.

As in the previous year the Railway Week was celebrated from 10 to 16 April 1957. The Public Relations Branch of the Railway Board organised an All India Railway Photographic Exhibition from 9 to 16 April on this occasion and it was opened by the Vice-President of India. The exhibition, which had an international section with about 20 foreign countries participating, was arranged as part of the drive for promoting art amongst railwaymen and with this object cash prizes were awarded for photographs of merit.

A variety of activities marked the celebration of the Railway Week. On the concluding day of the week, the Minister for Railways presented certificates of merit to 16 selected railway employees for outstanding services rendered by them.

During the year under review, a brochure entitled 'Wheels for the Plan' was published by the Ministry of Information and Broadcasting on behalf of the Ministry of Railways. Another brochure entitled 'Railway Careers' was published and put on sale by the Railway Board.

A film entitled 'Freedom on Wheels' was also produced by the Ministry of Information and Broadcasting at the request of the Railway Board.

20. Complaints.—The Complaints organization on the Railways continued to function satisfactorily.

The number of complaints received during the year by the Railway Administrations was 41,846 as compared to 38,189 during 1956-7.

The complaints received were promptly acknowledged, enquiries thereon instituted and results communicated to the complainants, suitable disciplinary action being taken against the staff found responsible.

21. Security measures on Railways.—Further progress was made in the implementation of the scheme of reorganisation of the Railway Protection Force. During the year, the office of Security Adviser and Inspector General, Railway Protection Force was formed into a separate Security Directorate, with the Inspector General, Railway Protection Force as ex-officio Director, Security. In July 1957, the Railway Protection Force Act constituting the Force as a single national unit centrally administered, was passed by the Parliament and received the assent of the President in August 1957. The rules under the Railway Protection Force Act are being formulated, and on their promulgation, the Act will be fully in operation.

With the establishment of the Security Directorate in the Railway Board, the organisational work of the Railway Protection Force was speeded up and the problems affecting the security of railways were taken up at higher levels with different Ministries in the Union and State Governments, resulting in better co-ordination between the railways and civil administrations. During the year, the Railway Protection Police, which had been specially raised to meet emergencies during the disturbed conditions in 1946-7 in the States of U. P., Bihar, West Bengal, Assam and Orissa, was disbanded finally with effect from 30 June 1957 and the duties of escorting goods trains and guarding and patrolling all vulnerable points and sections were taken over by an armed wing of the Railway Protection Force. This armed wing has been tackling the problem of armed attacks, on goods trains and yards, with confidence. They have also rendered effective support to the State Police during emergencies and special operations and in patrolling the permanent way.

The Uniformed and administrative branch of the Force continued to function satisfactorily.

Crime of the type prevalent on the railways has deep roots, and it is more by effective study and selective and sustained attention that it can be tackled. For this purpose, the crime intelligence branch—an important branch of the Railway Protection Force was re-organised with a Central Crime Bureau at the headquarters of each railway consisting of two separate sections—one dealing with the investigation and detection of specialised crimes on railways and the other with the maintenance of crime statistics and records of criminals. Detection and recoveries of stolen railway property were made by this branch, specially on the Eastern Railway.

The importance of careful training and the building up of tradition and *esprit de corps* from initial recruitment received due recognition, and the training schools were organised on all railways and recruits trained. Further progress was made in putting the existing untrained personnel through a course of training. Refresher courses were also held for persons eligible for promotion. The adequacy and effectiveness of supervisory ranks and the quality of their inspection and direction need further attention. Necessary proposals on the basis of experience but with due stress on economy are under consideration.

The re-organisation of the Fire Services on the Railways with the emphasis on prevention by removal of fire hazard causes to the extent possible and to reduce losses in fires that may still occur, was also taken up

during the year, but much progress could not be made on account of difficulty in finding qualified officers, technical staff and equipment. Suitable officers among those already in service are being sent to the National Fire Service College, Nagpur, for qualifying courses.

The fires that occurred were mostly minor but for three heavy explosions of consignments of fireworks in transit. Special investigations were made into these cases and action taken to prevent their recurrence.

22. Anti-sabotage measures.—During the year the Security Branch paid attention to the systematic study of "Sabotage on Railways". It was found that, on an average, every year there were reports of about 90 cases of tampering with tracks, most of which fortunately did not result in serious accidents. The matter was brought up for discussion at the annual conference of Inspectors General of Police held by the Ministry of Home Affairs in January 1958 and proposals for co-ordinated action by the State Police and by Administrations were examined. At the instance of the Railway Board, the matter was also examined by the Intelligence Bureau, Ministry of Home Affairs, in consultation with the Criminal Investigation Departments and the Governments of the States.

The following security measures have been considered in this connection:

(i) Impressing responsibility on villagers of the surrounding area by education and propaganda;

(ii) Payment of rewards to persons giving vital information ;

(iii) Collection of intelligence by the Government Railway Police;

(iv) Patrolling of affected areas with motor trollies; and

(v) Fullest co-ordination and pooling of resources between the Railway Protection Force, Railway police, District police and Railway staff.

Some of the State Governments also suggested the enforcement of a punitive system of collective village responsibility in cases of sabotage, but the consensus of opinion among the Inspectors General of State Police was that co-ordination and well organised patrolling of limited vulnerable sections by the Railway police, the permanent way staff and the Railway Protection Force will be the only practicable action.

General Managers of the Railway Administrations have been instructed to get into touch with the local Governments and have these recommendations examined in detail and implemented.

23. Crime.—Crime on Railways is only a reflection of the crime situation in the country. Bihar and West Bengal went through economic strain due to the vagaries of nature and the scarcity conditions prevailing during the year are, as was to be expected, reflected in the increased crime in these areas. The Eastern and South Eastern Railways alone contributed more than half the total crimes on all Indian Railways. The incidence of crime was studied and co-ordinated and sustained action was taken with the police and other Railway Departments to get at the correct positions as it was found that all occurrences were not reported and brought on record. This has produced certain gratifying results by way of location of criminals responsible, their arrests and increased recovery of property and it is expected that sustained follow up action on these lines will have an abiding effect on crime.

24. Theft and damage to Carriage and Electrical fittings.—Figures of losses of such fittings for the past two years are as follows:

	Rs.
1956-7	1,760,855
1957-8	1,490,801

A detailed examination was undertaken jointly with the departments concerned and it was found that the major items of loss under this heading was in respect of dynamo belts and special attention was paid to such losses.

It was found that these belts were falling off so frequently that it has been difficult to assess the correct incidence of loss due to theft and loss due to normal wear and tear and such falling off. Stricter accounting and joint checks were arranged in consultation with the Chief Electrical Engineers to pin point the losses, prevent duplication and tighten supervision and further co-ordinated action was taken with the State Police to locate channels of disposal and deal with receivers of stolen property. Instructions were also issued to permanent way gangmen working on line to pick up such belts and deposit them at the nearest store or with the Railway Protection Force. Other practicable security measures were also undertaken by way of watch by men in plain clothes, joint checks, locking of vacant compartments and surprise raids.

25. Thefts of railway property from workshops and Stores.—During the year under report cases involving a loss of Rs. 178,437 were reported against Rs. 166,654 reported during the year 1956-7. The South Eastern and Western Railways registered some decrease while other Railways reported slight increase. The losses were studied by the officers of the Railway Protection Force and the Mechanical Departments and measures taken to check such losses.

26. Thefts of property entrusted to the Railways for safe carriage.—During the year under review a slight increase in the number of cases under "Running train theft, yard theft and goods shed theft" has been noticed as compared to 1956-7, the figures being as follows:

	Running train theft		Yard heft		Goods shed theft	
	1956-7	**1957-8**	1956-7	**1957-8**	1956-7	**1957-8**
Total No. of cases on all Indian Railways . . .	2,018	**2,194**	1,070	**1,105**	738	**841**

The increase is attributed to the result of action taken to ensure better registration of crimes during the year. The following are some of the important measures intensified during the year to check thefts on Railways:

(i) deputation of plain clothed staff to collect intelligence relating to the activities of criminals and suspects and lines of disposal of stolen property;

(ii) escorting of trains by armed wing of railway protection force during night;

(iii) posting of pickets at vulnerable spots;

(iv) joint patrolling by Railway Protection Force and police of vulnerable sections of railway track;

(v) close liaison between the Railway Protection Force and the Government Railway Police and local police and other Railway Departments at all levels by means of holding co-ordination meetings and exchange of views on crimes and criminals;

(vi) award of deterrent punishment to Railway Protection Force staff found negligent in performing their duty;

(vii) progress in riveting and Ellis Patent locking of wagons containing valuable commodities; and

(viii) formation of a dog squad on the Southern Railway.

27. Floods and cyclones.—Considerable damage was done to Railway property during the year as a result of heavy rains, floods and cyclones. Details of the damage caused by such natural causes are shown in paragraph 100 of Chapter IV of this Report.

The total cost of damage to all the Railways on account of floods and cyclones during the year was approximately Rs. 34.21 lakhs.

28. Railway Rates Tribunal.—At the beginning of the year, the Tribunal had on hand three complaints from the public pending disposal. The following two new complaints were filed during the course of the year.

Complaint No. 4 of 1957 by the Mahabir Jute Mills Ltd., Sahjanwa against the North Eastern Railway, Northeast Frontier Railway and Union of India alleging that the respondents by refusing to quote station-to-station rates for jute to Sahjanwa from ten stations in Katihar area and seven stations in U. P. have subjected their mill to undue and unreasonable prejudice *vis-a-vis* the jute mills at Kanpur.

Complaint No. 5 of 1957 by Shri Krishna Gyanoday Sugar Mills Ltd., Guraru, against Eastern Railway and Union of India pleading that the respondents are giving undue and unreasonable preference or advantage to the competitors of the complainants in the Sugar Industry by refusing to quote station-to-station rates for sugar cane from certain stations to Guraru.

Of these five complaints, two were disposed of and three were pending disposal before the Tribunal.

In accordance with the revised disciplinary procedure introduced with effect from 1 May 1952, twentynine references were received during the year from the General Managers of Central, Eastern, Northern, Southern and Western Railways besides the one pending disposal on the 31 March 1957, and the Tribunal after going through the record, tendered advice on twenty-eight such references. The remaining two cases received in March 1958 are under disposal.

29. Implementation of decisions for division of rolling stock between India and Pakistan.—As mentioned in last year's Report, the Railway Board (India) and the Railway Division (Pakistan) were to draw up the final list of rolling stock under different categories allotted to the respective countries on the basis of the decisions arrived at a meeting of the Indo-Pakistan Stores Sub-Committee (Railways) held at New Delhi in December 1954 and exchange the same by 31 March 1955. The revised division lists of rolling stock have not yet been compiled and exchanged by either side and the matter is now on the agenda for the next Indo-Pakistan Stores Sub-Committee meeting for further consideration. The meeting, however, has not yet been held.

30. Loss of man-days as a result of strikes.—The details of the total number of man-days lost as a result of strikes on Indian Railways during the year 1957-8 are summarised in the following table:

Railway	Number of man-days lost due to legal strikes	Number of man-days los due to illegal strikes
Central	*Nil*	6,241
Eastern	*Nil*	69
Northern	*Nil*	164
North Eastern	*Nil*	586
Northeast Frontier	*Nil*	*Nil*
Southern	*Nil*	*Nil*
South Eastern	*Nil*	72
Western	*Nil*	4,928
Chittaranjan Locomotive Works	*Nil*	*Nil*
Integral Coach Factory	*Nil*	*Nil*
Grand Total	*Nil*	12,060

CHAPTER II

FINANCIAL RESULTS

A. AGRICULTURAL CONDITIONS AND FOREIGN TRADE DURING 1957-8

31. Monsoon conditions and agricultural situation in India during 1957-8.—The effect of monsoons has a close bearing on the working of Railways in India not only from the point of view of breaches and flooding of portions of permanent way where its impact is felt almost instantaneously, but also from the financial angle. India being a predominantly agricultural country, whose agricultural yield depends mostly on rainfall, any abnormal changes in the rains naturally affect the general economy of the country.

The rainfall during 1957 monsoon was not satisfactory in most parts of the country especially in the north and north-eastern regions compared to the last four seasons—1953 to 1956. The south-west monsoon, which accounts for about 75 per cent of the total annual rainfall and has a predominant influence on agricultural production, was unfavourable for agricultural operations in 1957, its onset being delayed and then its end coming abruptly in September. Prolonged spells of drought prevailed especially over north-eastern and central parts of the country. On the other hand, North Bihar and Jammu and Kashmir were severely affected by excessive rains and floods in August 1957. The *Khariff* crops, especially rice, were affected considerably due to deficient rainfall. However, the season was comparatively free from pests and crop diseases. In North India the post-monsoon showers were deficient over the area as a whole. During the winter monsoon period, the *Rabi* crops were sown under unfavourable conditions due to prolonged spells of drought prevailing during the main *Rabi* growing regions during September to December. The growth of *Rabi* crops was also affected for want of adequate soil moisture. Consequently, production of *Rabi* crops like wheat, barley and gram declined considerably in the affected regions. The condition of the standing crops in the South was, however, satisfactory during this season. During the pre-monsoon period, the light seasonal rainfall during March—April, 1958 was deficient in North East India. In the southern areas, however, rains during the season proved to be beneficial for the sowing of paddy and cotton.

The production of both *Khariff* and *Rabi* crops during 1957-8 thus generally declined even though there was not much decline in acreage. The production of rice during the year decreased by about 3.46 million tons or 12.2 per cent over 1956-7. The short fall in rice production was, however, partially made up by the increase in production of other *Khariff* cereals, especially of two major millets, *viz.*, jowar and bajra which alone showed an increase of 1.5 million tons during 1957-8. Of the *Rabi* crops, the production of wheat during 1957-8 declined by about 1.6 million tons or 17.8 per cent and that of barley by 0.6 million tons or 23.1 per cent. Among the cash crops, production of major oilseeds, jute, sesamum, castor seeds, rape and mustard and linseed dropped. The production of sugarcane also declined. However, groundnut and cotton production showed some increases. On the whole, the production of foodgrains and cash crops during 1957-8 showed a considerable decline as compared to 1956-7 mainly due to unfavourable weather conditions.

The percentage variations as compared with the previous year, in area and production of principal crops, according to the latest information available for 1957-8 are indicated below:

PERCENTAGE VARIATIONS IN ACREAGE AND YIELD OF PRINCIPAL CROPS IN 1957-8 OVER 1956-7

Crop	Acreage Per cent	Yield Per cent
Rice	−0·37	−12·2
Wheat	−11·7	−17·8
Maize, millet and barley	−2·92	−10·3
Gram and other pulses	−6·61	−18·1
Sugarcane	−0·71	−5·69
Groundnut	+7·49	+1·69
Castor seed	−6·36	−21·8
Sesamum	−3·27	−17·9
Rape and mustard	−4·14	−11·8
Linseed	−20·2	−29·4
Cotton	+1·33	+0·38
Jute	−8·07	−4·66

32. Trade Review.—There has been an increase in the foreign trade of India including sea, air and land borne trade but excluding the direct transit trade during 1957-8, as compared with the previous year. While larger imports were principally responsible for this rise in the total trade, there was also considerable increase both under exports and re-exports. The following figures present an overall picture of the foreign trade of India in 1957-8 as compared with 1956-7:

(In crores of rupees)

	1956-7	1957-8	Inc. in 1957-8 over 1956-7
Imports	8,39·6	10,00·8	+1,61·2
Re-exports	5·5	6·6	+ 1·1
Exports	6,08·1	6,24·6	+ 16·5

Value of imports by sea, air and land.—The total recorded value of imports of foreign merchandise rose by Rs. 1,61 crores or about 19 per cent from Rs. 8,40 crores in 1956-7 to Rs. 10,01 crores in the year under review. Imports of metals and manufactures (including ordnance stores) thereof increased from Rs. 1,81 crores to Rs. 2,15 crores or about 19 per cent and that of machinery from Rs. 1,57* crores to Rs. 2,10 crores or about 34 per cent. There were also increases in the imports of mineral oils, instruments and apparatus. The import of raw cotton, however, declined from Rs. 51 crores to Rs. 41 crores during the year. The heavy rise in the imports was mainly due to the continued impact of the Second Five Year Plan.

Value of exports by sea, air and land.—The total recorded value of exports increased considerably from Rs. 6,08 crores in 1956-7 to Rs. 6,25 crores in 1957-8. Exports of manganese ore increased from Rs. 26 crores to Rs. 30 crores in the year under review. There were also slight increases in the exports of cashew kernel and groundnuts. Exports of tea, cotton piecegoods, lac, jute bags and cloth, however, declined from Rs. 1,46 crores to Rs. 1,14 crores, Rs. 63 crores to Rs. 57 crores, Rs. 9 crores to Rs. 7 crores and Rs. 1,16 crores to Rs. 1,08 crores respectively. There were also decreases in the exports of certain other items, the most important being raw cotton which came down from Rs. 13 crores to Rs. 9 crores.

Value of re-exports by sea, air and land.—The total recorded value of re-exports increased slightly from Rs. 5.5 crores to Rs. 6.6 crores during the year under review. Re-exports of metals and manufactures increased from Rs. 35 lakhs to Rs. 47 lakhs and those of machinery rose from Rs. 57 lakhs to Rs. 63 lakhs. There were increases in respect of a few other items also. The re-exports of raw wool during the year 1957-8 were, however, 'nil' as against Rs. 94 lakhs in the previous year.

* Revised figure.

33. Investment.—At the end of March 1958, the total investment on all railways in India, including Non-Government Railways and lines under construction, from Capital (Loan account) as well as Railways' own resources, amounted to Rs. 14,41.52 crores, of which Rs. 14,35.32 crores represented the investment on Government Railways, financed from different sources as under :

TOTAL INVESTMENT ON INDIAN GOVERNMENT RAILWAYS FROM DIFFERENT SOURCES

(In lakhs)

	As on 31 March 1957	As on 31 March 1958
	Rs.	Rs.
Captial-at-charge (loan account inclusive of premia paid on the purchase of certain Companies' Railways).	10,71,71	12,22,44
Depreciation Reserve Fund (on improvement of assets replaced)	48,63*	60,28†
Development Fund	75,59*	99,36†
Revenue	43,17*	53,24†
Total Investment .	12,39,10*	14,35,32†

*Revised figures.

† These figures are provisional.

The balance of Rs. 6.20 crores was the capital raised by Companies and District Boards.

The figure of capital-at-charge of Indian Government Railways, which is still provisional pending closing of pre-partition accounts and finalization of the balances brought forward on 1 April 1950 in the case of *ex*-States Railways comprises the following items :

	£
Liabilities and debt incurred in the purchase of Railways	131,164,798
Less liability and debt cancelled by the operation of annuities and sinking funds	23,756,284
Net amount outstanding	107,408,514*
	Rs.
Direct expenditure by Government (thousands)	10,73,26,64
Amount in sterling converted into rupees (thousands)	1,49,16,87
Grand Total	12,22,43,51

By far the greater portion of this amount namely Rs. 12,22,40,51 thousands is Government Capital and only a sum of Rs. 300 thousands represents the cost of Jorhat Railway given as gift by the Assam Government.

The investment on Government Railways during the year 1957-8 amounted to Rs. 1,96·58 crores as detailed below :

	(In lakhs) Rs.
Capital (loan account)	1,51,09
Depreciation Reserve Fund (on improvement of assets replaced)	11,65†
Development Fund	23,77†
Revenue	10,07†
Total	1,96,58†

*The amounts £ 2,575,000, £ 2,000,000, £ 1,500,000 and £ 1,000,000 representing the share capital respectively of the Great Indian Peninsula, the Bombay , Baroda and Central India, the Madras and Southern Mahratta and the South Indian Railways (the first two amounts being paid off during 1925-6 and 1941-2 respectively and the last two during 1944-5) have been converted at the appropriate average rate of exchange for these years and the balance of £ 100,333,514 at the rate of 1s. 6d. to the rupee.

† Provisional figures.

The capital outlay on Non-Government Railways during 1957-8 was Rs. 5.14 lakhs only.

The distribution of the capital outlay in 1957-8 over the different Indian Government Railways is shown in the accompanying statement.

CAPITAL OUTLAY ON INDIAN GOVERNMENT RAILWAYS DURING 1957-8

(Figures in lakhs of rupees)

Railways	Open line			New construction			Grand Total
	Works	Rolling-stock	Total	Works	Rolling-stock	Total	
Central	10,95	11,07	22,02	2	..	2	22,04
Eastern	12,88	9,39	22,54*	86	..	86	23,40*
(i) Northern (Commercial)	7,08	10,32	17,40	73	..	73	18,13
(ii) Northern (Strategic)	(—) 63	4	(—) 59	..	..	..	(—) 59
North Eastern	4,54	6,13	10,67	1	..	1	10,68
Southern	6,20	8,47	14,67	17	..	17	14,84†
South Eastern	15,97	9,64	25,61	6,36	..	6,36	31,97
Western	9,13	5,31	14,44	1,64	..	1,64	16,08
Ganga Bridge Project	..	..	..	1,99	..	1,99	1,99
Calcutta Electrification Project	..	..	..	2,90	2,78	5,68	5,68
Main Line Electrification Project	..	..	..	80	1,82	2,62	2,62
Chittaranjan Locomotive Works	1,97	..	1,97	..	..	..	1,97
Integral Coach Factory	1,97	..	1,97	..	..	..	1,97
Locomotive Component Works	19	..	19	..	..	..	19
Miscellaneous	12	..	12	..	..	..	12
	70,37	60,37	1,31,01*	15,48	4,60	20,08	1,51,09†*

*Includes Rs. 27.35 lakhs being the purchase price of *Ex.* Kalighat Falta Railway for which break up is not available.

†Excludes Rs. 80.47 lakhs paid for the purchase of financial interests of Salem and Tanjore District Board Lines—a charge against 67-C-Capital contributed by Railway Companies towards outlay on Indian Railways-Discharge of Debentures.

B. FINANCIAL RESULTS OF INDIAN RAILWAYS (INCLUDING WORKED LINES)

34. Financial results of working.—The gross receipts* of Government Railways including the worked lines for the year 1957-8 amounted to Rs. 379.78 crores, as compared to Rs. 347.57 crores in 1956-7 representing an increase of Rs. 32.21 crores.

The ordinary working expenses (including suspense) for the year amounted to Rs. 264.18 crores, as against Rs. 233.94 crores in 1956-7, involving an increase of Rs. 30.24 crores. The contribution to Depreciation Reserve Fund was Rs. 46.23 crores. Out of this amount, the sum of Rs. 45 crores is on account of the capital assets of the Government Railways chargeable to their working expenses, while the balance of Rs. 1.23 crores is on account of capital assets of the Chittaranjan Locomotive Works (Rs. 1.06 crores) and the Integral Coach Factory (Rs. 0.17 crores) by debit to Manufacturing Suspense. The additional contribution of Rs. 1.23 crores as a charge against the Workshop Manufacture Suspense in the capital accounts of the Chittaranjan Locomotive Works and the Integral Coach Factory was necessitated in the interest of accurate costing on commercial principles and represents the depreciation charges accruing on plant and machinery, etc., at these works. With effect from 1955-6 the amount of the contribution has been raised from Rs. 30 crores to Rs. 45 crores for Railways and it is proposed to keep the annual contribution at this level during the period of the Second Five Year Plan in order to meet the heavy expenditure on replacements expected to be incurred during that period. Payment to worked lines as their share of net earnings amounted to Rs. 26 lakhs as against Rs. 33 lakhs in 1956-7. The operating ratio, that is the ratio of working expenses (excluding suspense but including Appropriation to

* Gross receipts include *suspense*.

Depreciation Reserve Fund) to gross earnings was 81.21 per cent as against 79.90 per cent in 1956-7.

The net expenditure on miscellaneous transactions during the year was Rs. 12.56 crores as against Rs. 9.92 crores in 1956-7. The net revenue for the year was Rs. 57.78 crores as against Rs. 58.38 crores in 1956-7.

The dividend paid to General Revenues during the year was Rs. 44.40 crores as against Rs. 38.16 crores in 1956-7. The surplus for the year amounted to Rs. 13.38 crores as against Rs. 20.22 crores in 1956-7, representing a decrease of Rs. 6.84 crores.

The interest on the Depreciation Reserve Fund and Development Fund balances credited to the Funds during the year under review was Rs. 3.15 and Rs. 0.26 crores respectively. The amount withdrawn during the year for renewals and developmental works amounted to Rs. 63.62 and Rs. 25.53 crores as against Rs. 43.68 and Rs. 19.84 crores in 1956-7 respectively. The net charge to the Depreciation Reserve and Development Funds in 1957-8 was Rs. 14.24 and Rs. 11.90 crores as against the net accretion of Rs. 4.05 and Rs. 0.80 crores respectively in 1956-7. The balances in the Depreciation Reserve and Development Funds and Railway Revenue Reserve Fund at the end of the year were Rs. 88.89†, Rs. 1.85 and Rs. 49.68 crores as against Rs. 103.14, Rs. 13.75 and Rs. 48.07 crores respectively in 1956-7. The interest credited to Railway Revenue Reserve Fund during 1957-8 was Rs. 1.61 crores against Rs. 1.46 crores during 1956-7, while there was no withdrawal, from the Fund during both the years.

35. Traffic receipts.—The total gross receipts* of Indian Railways excluding worked lines amounted to Rs. 379.25 crores.

The details are given in the statement below:

GROSS RECEIPTS OF GOVERNMENT RAILWAYS

(In crores of rupees)

	1955-6	1956-7	1957-8
Passenger earnings	107·71	116·33	**119·10**
Other coaching earnings	20·87	21·09	**24·23**
Goods earnings‡	180·28	203·96	**229·68**
Sundry earnings	6·81	7·51	**8·41**
Suspense	0·62	−1·32	**−1·64**
TOTAL	316·29	347·57	**379·78**
Less earnings of worked lines	0·73	0·58	**0·53**
Gross receipts* of Government Railways	315·56	346·99	**379·25**

The increase under gross receipts during 1957-8 as compared with the last year is mainly under goods earnings, *viz.*, Rs. 25.72 crores, followed by other coaching earnings and passenger earnings which registered increases of Rs. 3.14 crores and Rs. 2.77 crores respectively, during the year.

36. Working expenses.—A comparison of the ordinary working expenses excluding suspense under the various demand heads for the year 1957-8 with those for 1956-7 is given in the following statement:

ANALYSIS OF ORDINARY WORKING EXPENSES—GOVERNMENT RAILWAYS

(In crores of rupees)

Demand heads	1956-7	1957-8	Increase(+) Decrease(−) over 1956-7
4. Administration	34·74	**32·17**	− 2·57
5. Repairs and maintenance	86·00	**90·62**	+ 4·62
6. Operating (Staff)	52·80	**53·82**	+ 1·02
7. Operation (Fuel)	27·28	**48·03**	+20·75
8. Operation (other than staff and fuel)	10·65	**14·86**	+ 4·21
9. Miscellaneous expenses	16·47	**18·29**	+ 1·82
10. Labour welfare	5·83	**6·97**	+ 1·14
TOTAL	233·77	**264·76**	+30·99

* 'Gross receipts' include while 'Gross earnings' referred to later in part C of this Chapter exclude, '*suspense*'.

† Exclude Rs. 98 thousands on account of difference between the *ad hoc* balance and further revised balance as on 15-8-1947 adopted during the current year without financial adjustment.

‡ 'Goods earnings' include earnings from demurrage wharfage, etc., while 'earnings from goods carried, referred to later in part C of this chapter exclude these items.

Demand-wise variation between the figures of 1957-8 and those for the previous year are largely due to the under-mentioned changes in the structure of the demands for grants introduced in 1957-8.

(i) Provision for subordinate supervisory staff, whose duties are mainly connected with repair and maintenance, transferred from Demand No. 4 to Demand No. 5.

(ii) Provision for subordinate supervisory staff, whose duties are mainly connected with the operation of the Railway, transferred from Demand No. 4 to Demand No. 6.

(iii) Credit for freight on the carriage of materials, including coal, for Railway use distributed pro-rata among the operational demands, *i.e.*, Demands 6 to 8 in the proportion of the gross expenditure under each of these demands whereas previously, the credit for freight on coal was booked under Demand No. 7 while that relating to other Railway material under Demand No. 8.

After making allowance for the said compensatory adjustments among various demand heads, the net increase in working expenses during 1957-8 was mainly due to the cost of additional staff appointed to cope with the increase in traffic to implement the Second Five Year Plan; extra expenditure on account of re-distribution of posts in the different grades with retrospective effect from 1 April 1956; an *ad hoc* increase of Rs. 5 in the dearness allowance sanctioned as interim relief to staff drawing basic salary up to Rs. 300 p.m. on the recommendation of the Pay Commission; heavier expenditure on repairs to buildings, track, bridges and safety works as also machinery and rolling-stock; higher outlay on costs, freight, handling charges, excise duty and sales tax on coal mainly due to increase in price of coal, increase in traffic and levy of Central sales tax; gradual introduction of departmental catering and premium paid in the purchase price for taking over the financial interests of Salem and Tanjore District Boards in certain sections of the Southern Railway.

The financial results of working of the Government Railways showing the capital-at-charge, gross receipts, working expenses, net revenue receipts and dividend, etc., for the last three years are given in the statement below:

FINANCIAL RESULTS OF WORKING OF GOVERNMENT RAILWAYS

(In thousands)

	1955-6	1956-7	1957-8
	Rs.	Rs.	Rs.
Capital-at-charge	9,68,97,58	10,71,71,04	12,22,43,51
Deduct amount of capital contributed by companies	83,47	83,47	3,00
Net Government Capital-at-charge	9,68,14,11	10,70,87,57	12,22,40,51
Gross receipts *	3,16,29,06	3,47,56,84	3,79,77,91
Working expenses including suspense and appropriation to Depreciation Reserve Fund	2,57,95,08	2,78,93,73	3,09,17,31
Payment to worked lines	26,59	32,72	26,35
Net traffic receipts	58,07,39	68,30,39	70,34,25
Net miscellaneous expenditure	7,73,44	9,92,38	12,56,34
Net revenue receipts	50,33,95	58,38,01	57,77,91
Percentage of net revenue receipts on capital-at-charge	5·40	5·45	4·73
Charges against net revenue receipts—			
Dividend to general revenues	36,11,86	38,16,36	44,39,93
Net gain or loss to Government			
Gain .	14,22,09	20,21,65	13,37,98
Loss .	—	—	—

37. **Works expenditure.**—The works expenditure during the year amounted to Rs. 250.66 crores as against Rs. 178.95 crores in 1956-7. Of this, an amount of Rs. 151.09 crores (including Rs. 27.35 lakhs paid towards purchase price of Kalighat Falta Railway but excluding Rs. 80.47 lakhs paid for the purchase of financial interests of Salem and Tanjore District Boards Lines during 1957-8 as a charge against the head Capital 67-C-Capital contributed by Railway Companies towards outlay on Indian Railways—Discharge of Debentures) was charged to Capital, Rs. 63.62 crores

* Include suspense.

to the Depreciation Reserve Fund, Rs. 25.53 crores to the Development Fund and Rs. 10.42 crores to Revenue (Open Line Works-Revenue). The corresponding figures for the previous year were Rs. 107.38, Rs. 43.68, Rs. 19.84 and Rs. 8.05 crores respectively. The railway-wise details are given in the statement below:

NET WORKS EXPENDITURE DURING 1957-8

(In crores of rupees)

Railways	Capital	Depreciation Reserve Fund	Development Fund	Open Line Works Revenue	Total
Central	22·04	13·19	5·46	1·77	42·46
Eastern	23·40	6·38	1·84	1·21	32·83
Northern	17·55	7·85	2·69	2·17	30·26
North Eastern	10·68	6·68	3·20	0·75	21·31
Southern	14·84	9·74	3·50	1·39	29·47
South Eastern	31·97	8·54	1·68	0·96	43·15
Western	16·08	11·19	7·16	2·17	36·60
Chittaranjan Locomotive Works	1·96	0·02	—	—	1·98
Integral Coach Factory	1·97	—	—	—	1·97
Ganga Bridge Project	1·99	—	—	—	1·99
Locomotive Component Works	0·19	—	—	—	0·19
Calcutta Electrification Project	5·68	0·03	—	—	5·71
Main Line Electrification	2·62	—	—	—	2·62
Railway Board	0·12	—	—	—	0·12
Total	1,51·09	63·62	25·53	10·42	2,50·66

For detailed statistics of works expenditure, reference may be made to statement 4(*b*) of Volume II of this Report.

38. Gain or loss.—The net results of working showing gain for the three years 1955-6 to 1957-8 are given in the following statement:

(In lakhs)

	1955-6	1956-7	1957-8
	Rs.	Rs.	Rs.
Gain	14,22	20,22	13,38

39. Development Fund.—During the year, the Development Fund received a credit of Rs. 13·63 crores including interest, while Rs. 25·53 crores were withdrawn from it for meeting expenditure chargeable thereto, giving a net debit of Rs. 11·90 crores to the Fund. The closing balance at credit in the Fund on 31 March 1958 was Rs. 1·85 crores.

C. GENERAL RESULTS OF WORKING OF ALL INDIAN RAILWAYS (INCLUDING NON-GOVERNMENT RAILWAYS)

40. Analysis of earnings.—The total earnings (excluding suspense) of all railways for the year 1957-8, including non-Government Railways, amounted to Rs. 382·99 crores. Of this, the goods traffic accounted for Rs. 225·72 crores or 58·94 per cent, passenger traffic for Rs. 120·08 crores or 31·35 per cent and parcels, luggage and other miscellaneous sources of revenue for Rs. 37·19 crores or 9·71 per cent.

41. Traffic and mileage.—The more important figures of traffic on all Indian Railways for the years 1955-6 to 1957-8 are summarized in the table below. There has been during the year a progressive increase in the volume of traffic handled.

STATISTICS OF TRAFFIC OF ALL INDIAN RAILWAYS
(INCLUDING NON-GOVERNMENT RAILWAYS)

	Year	Government Railways	Non-Government Railways	Total
Route mileage	1955-6	34,182	554	34,736
	1956-7	34,291	453	34,744
	1957-8	34,462	427	34,889
Passengers originating (millions)	1955-6	1,275	22	1,297
	1956-7	1,360	23	1,383
	1957-8	1,410	21	1,431
Passenger miles (millions)	1955-6	38,774	309	39,083
	1956-7	41,878	316	42,194
	1957-8	43,043	290	43,333
Tons originating (millions)	1955-6	114	1	115
	1956-7	124	1	125
	1957-8	132	1	133
Net ton miles (millions)	1955-6	36,434	38	36,472
	1956-7	40,188	39	40,225
	1957-8	44,861	36	44,897

42. Passenger earnings.—In comparison with 1956-7, passenger earnings on all Indian Railways increased by about Rs. 2·69 crores or 2·29 per cent, the number of passengers originating by about 48 million or 3·51 per cent, and passenger miles by about 1,139 million or 2·70 per cent. The increase in the number of passengers has been in all classes excepting the Second class.

The earnings, by classes, for all Indian Railways from passenger traffic for the three years 1955-6 to 1957-8 are summarized in the table below :

PASSENGER EARNINGS BY CLASSES

(ALL INDIAN RAILWAYS INCLUDING NON-GOVERNMENT RAILWAYS)

(Figures in lakhs of rupees)

Class	1955-6	1956-7	1957-8
Air-conditioned	88	93	98
First	5,88	6,44	6,61
Second	6,12	6,17	5,81
Third	95,87	1,03,85	1,06,68
TOTAL	1,08,75	1,17,39	1,20,08

As compared with the previous year, the earnings show increases under all classes except the Second class which recorded a decrease of 5·82 per cent in consequence of the policy of gradual withdrawal of Second class accommodation. The Air-conditioned, First and Third classes recorded increases of 5·69, 2·59 and 2·73 per cent respectively.

The number of passengers originating and the passenger miles by classes for the three years 1955-6, 1956-7 and 1957-8 are stated below :

VOLUME OF PASSENGER TRAFFIC BY CLASSES

(ALL INDIAN RAILWAYS INCLUDING NON-GOVERNMENT RAILWAYS)

(Figures in millions)

Class	Number of passengers originating			Passenger miles		
	1955-6	1956-7	1957-8	1955-6	1956-7	1957-8
Air-conditioned	0·086	0·10	0·104	51	54	58
First	19·0	21·1	23·4	774	855	897
Second	16·9	18·1	14·1	1,244	1,255	1,150
Third	1,231·4	1,343·2	1,393·5	37,014	40,030	41,228
Total	1,297·4	1,382·5	1,481·1	39,083	42,194	43,333

Detailed statistics of the number of passengers originating, passenger miles and earnings are given in Summary X and Statements 12 and 36 of Volume II of this Report.

43. Goods earnings.—During the year 1957-8, the earnings from goods carried amounted to Rs. 225·72* crores as against Rs. 201·09 crores in 1956-7, an increase of Rs. 24·63 crores or 12·2 per cent.

The total tonnage of goods originating, both revenue-earning and non-revenue traffic, increased by about 8 million or by 6·37 per cent, but as each ton of freight was carried on an average over a distance of 336·7 miles as compared with 320·8 miles during 1956-7, the total ton miles increased by 4,672 million or 11·6 per cent. The revenue-earning tonnage originating during 1957-8 recorded an increase of 4·46 million in comparison with 1956-7 and each ton of revenue-earning traffic was carried to a distance of 369·6 miles as against 346·7 miles during 1956-7. There were thus about 3,897 million more ton miles of revenue-earning traffic during the year. The improvement in goods earnings has been brought about both by the increase in goods traffic and increase in the supplementary charge referred to in para 75 of Chapter III of this Report.

* Excludes miscellaneous goods earnings like demurrage, wharfage, etc.

The average rate charged for carrying one ton of goods one mile also rose from 11·3 pies to 11·4 pies during the year.

The ton miles for the different commodity groups and the tonnage originating according to the different classes of commodities on the Government Railways during 1956-7 and 1957-8 are summarized below:

VOLUME OF GOODS TRAFFIC (GOVERNMENT RAILWAYS)

	Ton miles (millions)	
	1956-7	1957-8
A. Revenue-earning traffic—		
Coal	8,435	9,350
Grains	3,715	4,449
Oil seeds	578	671
Other commodities	21,312	23,470
Total—Revenue-earning traffic	34,040	37,940
B Non-revenue traffic—		
Railway coal and materials	6,146	6,921
Total—Revenue-earning and non-revenue traffic	40,186	44,861

	Tons originating (millions)	
	1956-7	1957-8
A. Revenue-earning traffic—		
I. Products of agriculture—	17·50	19·88
(a) Foodgrains	9·68	11·03
(b) Others	7·82	8·85
II. Products of animals	0·38	0·48
III. Products of mines—	41·77	44·46
(a) Coal for the public and non-Government Railways	23·40	24·42
(b) Others (including mineral oils)	18·37	20·04
IV. Products of forests	3·79	4·30
V. Manufactures	14·05	17·06
IV Products of forests	3·79	4·30
Total—Revenue-earning traffic	96·97	101·46
B. Non-revenue traffic (Railway coal and materials)	27·10	30·62
Total—Revenue-earning and non-revenue traffic	124·07	132·08

It will be of interest to note that the tonnage originating under the non-revenue traffic accounted for 23·2 per cent of the total tonnage during 1957-8 as compared with 21·8 per cent during 1956-7. The average distance travelled by the railway stores and materials other than coal is, however, much less than the public traffic. The transport capacity thus actually absorbed by the Railways for their own domestic requirements in terms of ton miles represented 15·4 per cent in 1957-8 as against 15·3 per cent in 1956-7, out of which Railway stores other than coal accounted for only 1·80 per cent as against 1·60 per cent during 1956-7.

The statement below presents details of the earnings from the principal commodities carried by the Government Railways during 1956-7 and 1957-8. It will be observed from the figures that excepting in the case of rice and

paddy, there have been increased receipts from traffic carried in respect of other commodities during 1957-8 as compared to 1956-7:

TRAFFIC RECEIPTS FROM DIFFERENT COMMODITIES
(GOVERNMENT RAILWAYS)

(In lakhs)

	1956-7	1957-8
	Rs.	Rs.
Coal, coke and patent fuel for the public	26,05	30,10
Rice and paddy	5,86	5,68
Gram, gram flour and pulses	5,65	7,19
Wheat and wheat flour	4,65	6,61
Oil seeds	3,98	4,62
Cotton raw (pressed and unpressed)	3,78	4,00
Fruit and vegetables fresh (including sugarcane)	3,39	3,60
Marble and other stones	6,96	9,14
Salt	3,59	4,68
Manganese ore	2,63	3,67
Other ores	4,38	6,04
Oil fuel and other mineral oils	4,13	4,98
Kerosene oil (in bulk and in tins)	4,85	4,89
Petrol (in bulk and in tins)	3,91	3,98
Wood unwrought	3,99	4,92
Sugar, refined and unrefined	4,83	6,21
Cotton manufactured	3,45	3,74
Vegetable oil and other edible oils	2,72	3,35
Cement and cement manufactured products	6,30	7,99
Iron and steel wrought	15,13	19,19
Provisions	3,35	3,51
Tea	1,51	2,12
Jute raw	1,73	2,06
Jute manufactured	1,28	1,57

For detailed statistics of goods traffic, reference may be made to Summary X, Statements 13, 29 and 36 of Volume II of this Report.

44. Measures relating to statistics and statistical organization.—During the year, two Conferences of Statistical and Compilation Officers were held at New Delhi, one in April 1957 and the other in December 1957, when various subjects of importance including incidence of missing returns, delay in submission of monthly statements, mechanization of statistics, effective inspections of various reporting agencies, *e.g.*, stations, sheds, etc., to ensure correctness in reporting of statistical data, training facilities for staff and uniformity in the compilation of Domestic statistics, were discussed. At the Conference held in December, the standard statistical forms drawn up by the Officer on Special Duty, Railway Board, were also examined and finalized. The procedure regarding compilation of the details of the freight traffic crossing other railways was improved upon, and it was decided that the statistics in respect of "cross" traffic should be compiled by the Statistical Offices of the destination railways and necessary details supplied to the intermediate railways in a set pro forma for inclusion of the data in their statistics.

The following changes have also been made in the contents of periodical and monthly statistics :

(*a*) The list of commodities, for which monthly tonnage and earning statistics are maintained, has been considerably amplified with effect from April 1957 ;

(*b*) The periodical wagon loading statement has been expanded to show details of loadings for more commodities with the additional information of tonnage loaded and average starting wagon load for each commodity head ; and

(*c*) The monthly statistics of locomotive, carriage and wagon workshop repairs have been amplified to show a number of additional items of information like percentage of general on cost ; expenditure on workshop buildings ; plants and machinery ; value of manufactured articles turned out from shops ; and absentee man hours.

Certain additional information and changes have also been incorporated in the statistics presented in Volume II of this Report. These are referred to in brief in the Introductory Note to that Volume.

The Economic Adviser and the Deputy Director, Statistics, Railway Board, represented the Ministry of Railways at the Statistical Conferences organized by the Central Statistical Organization, Cabinet Secretariat, Government of India. The Economic Adviser also gave talks on Railway Statistics to the trainees undergoing the following statistical courses conducted by that Organization :

(i) Three-year Statisticians' course of the Indian Statistical Institute, Calcutta ;

(ii) Training course for Senior Statisticians ; and

(iii) Training course for Junior Statisticians.

The Deputy Director, Statistics, continued to serve as a member of the Standing Committee for the co-ordination of Business Machine Installations, set up by the Central Statistical Organization.

CHAPTER III

TRANSPORTATION

A. OPERATING

45. **Operating General.**—The operating results during the year under review recorded an overall improvement in performance as compared with the year 1956-7 despite heavy rains, breaches and other abnormal factors responsible for dislocation of traffic movements. The achievement is all the more remarkable due to the exceptionally large volume of traffic and transportation handled during the year.

46. **Operating meetings.**—During the year under review, two meetings of the Operating Heads of all the Railways and the Director, Rail Movements, Calcutta, presided over by Member Transportation, Railway Board, were held in April 1957 at Calcutta and in January/February 1958 at Delhi. The operating results achieved on the various Railways were gone into in detail and steps formulated for improving wagon usage and carrying increased volume of traffic, particularly through heavily worked Sections and Junctions. Interchange, Junction and Transhipment quotas were reviewed and higher targets fixed where feasible to meet the demands of traffic. Indications were given to the Railways of the specific tasks confronting them for the successful implementation of the Second Five Year Plan, and the Railways were asked to plan their development works in a suitable order of priority to keep pace with the increased trends of traffic. The Committee also went into the question of passenger train operation with special reference to improving punctuality and the measures necessary to reduce the incidence of accidents

47. **Volume of traffic handled.**—The upward trend in the volume of traffic handled, which commenced in 1953-4, continued during the year 1957-8. Passenger traffic measured in terms of passenger miles increased during 1957-8 as compared with the previous year from 41,878 million to 43,043 million or by 2.78 per cent. Goods traffic, expressed in net ton miles, increased by 11.5 per cent from 39,910 million to 44,495 million. The increase in the passenger and goods traffic handled on the Government Railways is shown in the table below:

PASSENGER MILES AND NET TON MILES (GOVERNMENT RAILWAYS)

	1956-7	(In millions) 1957-8	Inc. per cent over 1956-7
Passenger miles	41,878	43,043	2·78
Net ton miles*	39,910	44,495	11·5

* Excludes traffic carried in departmental trains.

48. **Train miles.**—The train mileage operated during the year was 212.40 million, an increase of 7.08 million or of 3.45 per cent over 1956-7.

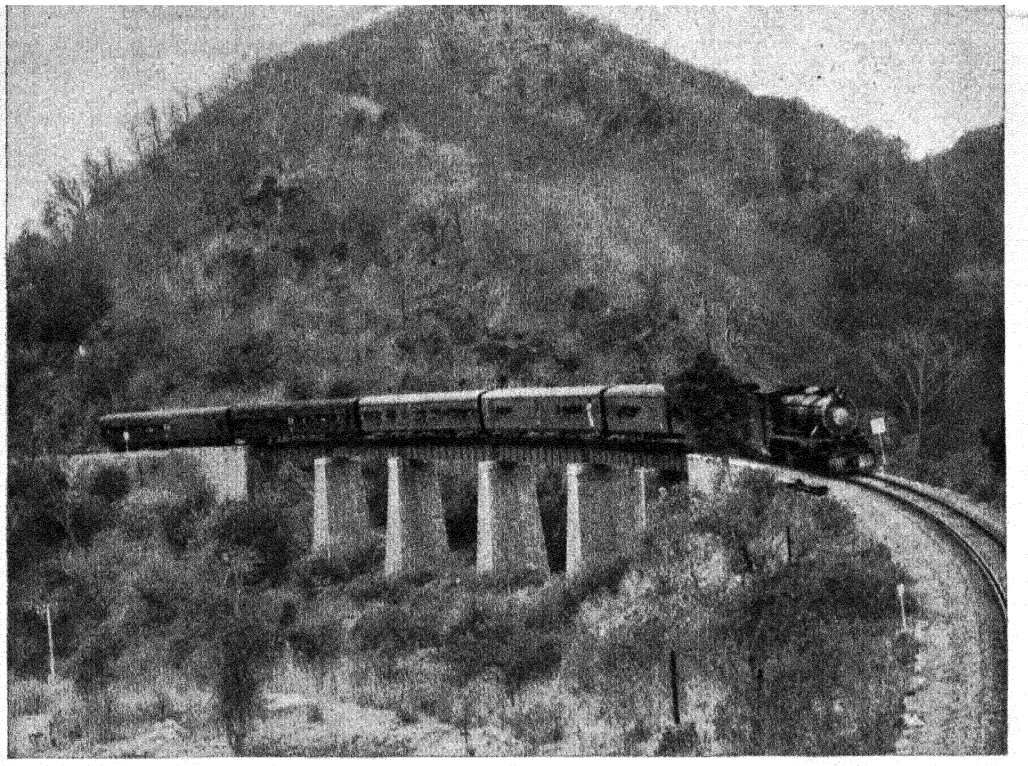
TRAIN MILEAGE OPERATED DURING 1957-8 COMPARED WITH 1956-7 (GOVERNMENT RAILWAYS)

	1956-7	(In thousands) 1957-8	Inc. per cent over 1956-7
Passenger (including proportion of mixed)**	118,703†	121,382	2·26
Goods (including proportion of mixed)‡	86,617	91,014	5·08

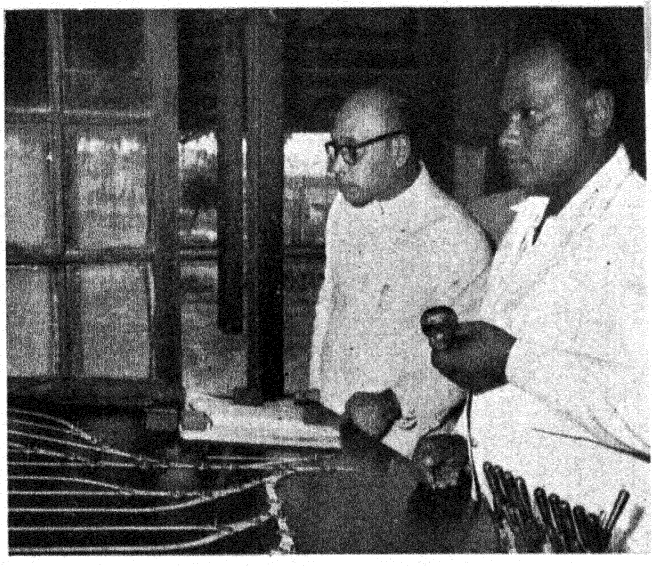
† Revised figure.

‡Includes mileage of trains hauled by electric locomotives but excludes departmental.

** Includes the mileage of trains conveying passengers and all other traffic booked at coaching rates, empty mileage run by passenger and other coaching stock, the mileage of electric locomotives and electric multiple unit suburban trains as well as military specials but excludes departmental trains.

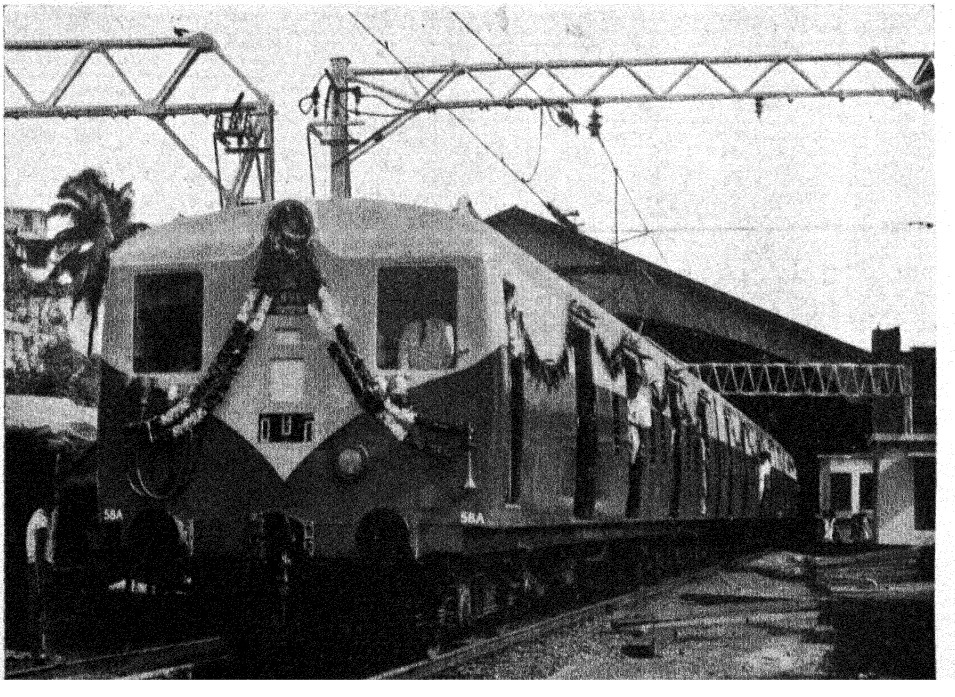


A PASSENGER TRAIN OVER A GHAT SECTION BETWEEN KAMBLIGHAT AND PHULAD—WESTERN RAILWAY



RAILWAY DEPUTY MINISTER WATCHING THE TONDIARPET MARSHALLING YARD FROM THE CABIN—SOUTHERN RAILWAY

THE FIRST JAPANESE ELECTRIC MULTIPLE UNIT RAKE LEAVING CHURCHGATE STATION—WESTERN RAILWAY



Passenger train miles increased during the year by 2.26 per cent from 118.70 million to 121.38 million as compared with an increase of 2.78 per cent in passenger miles.

Goods train miles totalled 91.01 million, representing an increase of 5.08 per cent over the figures for the preceding year as against an increase of 11.5 per cent in the ton mileage. The average freight load of goods trains (all traction) recorded as compared with the previous year increases of 6.29 per cent and 7.00 per cent on the Broad and Metre gauges respectively.

49. Punctuality of passenger trains.—The punctuality of mail and important trains recorded an improvement on the Metre gauge system, the percentage of trains not losing time having increased from 62.74 in 1956-7 to 75.44 in 1957-8. On the Broad gauge there was a slight improvement from 70.79 to 70.81. Further improvement was not possible, mainly due to the heavy traffic moved and consequent pressure on track, bridges, yards, etc., arising out of large development works undertaken in connection with the Second Plan. There were also other operational factors, such as, engine failures, accidents, displaced crossings, engineering restrictions, remodelling of yards in connection with electrification of the Howrah-Burdwan section and excessive pulling of alarm chain apparatus. Arrangements have, however, been made to institute special drives to improve the punctuality of passenger trains.

The following table indicates the results achieved in the form of percentage of passenger and mixed trains not losing time to the total number of trains run on all Government Railways during 1957-8 as compared with 1956-7:

PERCENTAGE OF PASSENGER AND MIXED TRAINS NOT LOSING TIME

Year	All trains (including electric multiple unit trains)	Mail and important through trains	Mixed trains	Suburban trains	Other passenger trains
Broad gauge—					
1956-7	77·96*	70·79*	86·89*	79·01 79·73*†	75·72
1957-8	**77·63**	**70·81**	**86·99**	**80·26@** **77·63†**	**76·29**
Metre gauge—					
1956-7	74·49*	62·74	77·71	70·10*@ 98·31*‡	69·64
1957-8	**80·00**	**75·44**	**80·17**	**91·81@** **97·07‡**	**76·56**

* Revised figures.
†Electric multiple unit trains of the Central and Western Railways.
‡Electric multiple unit trains of the Southern Railway.
@Includes electric train performance other than suburban on Eastern and Southern (Metre gauge) Railways.

50. Augmentation of passenger train services.—Passenger train services were augmented to the extent found feasible. On 1 April 1958, the passenger train services on Indian Railways, expressed in terms of train miles per day, had increased by 4,800 on the Broad gauge and by 2,400 on the Metre gauge, over the figures as on 1 April 1957.

51. Passenger trains.—The performance of passenger trains during the year as compared with performance during 1956-7 is given in the table below:

STATISTICS OF PASSENGER TRAFFIC (GOVERNMENT RAILWAYS)

(Figures in millions)

Particulars	Broad gauge		Inc. (+) or Dec. (−) per cent over 1956-7	Metre gauge		Inc. (+) or Dec. (−) per cent over 1956-7
	1956-7	1957-8		1956-7	1957-8	
Passenger miles	28,092·2	**29,510·7**	+5·05	13,058·6	**12,794·6**	−2·02
Coaching vehicle miles (including proportion of mixed)	1,143·6	**1,191·2**	+4·17	670·0	**698·6**	+4·27
Passenger train miles (including proportion of mixed)*	73·5†	**75·3**	+2·42	41·3	**42·2**	+2·18

*Includes the mileage of trains conveying passengers and all other traffic booked at coaching rates, empty mileage run by passenger and other coaching stock, mileage of trains hauled by electric locomotives and electric multiple unit suburban trains as well as military specials but excludes departmental.
† Revised figure.

52. Goods Traffic.—In spite of a considerable drop in sugarcane loading during the year by about 11,850 wagons on the Broad gauge and 5,300 wagons on the Metre gauge, there was a substantial increase in the movement of goods traffic during 1957-8 as compared with 1956-7, as will be seen from the figures of wagon loadings given below:

LOADING IN TERMS OF WAGONS (4-WHEELERS)

	1956-7	1957-8	Inc. per cent over 1956-7
Broad gauge	5,210,669*	5,464,531	4·87
Metre gauge	3,164,781*	3,405,527	7·61

* Revised figures.

Movement over difficult routes and junctions was planned in advance and targets were fixed for loading and other operations. As a result of the special drive initiated in the beginning of the busy season, it was possible to increase loading by 4.87 per cent on the Broad gauge and 7.61 per cent on the Metre gauge during the year as compared with the previous year. The increase in the volume of goods traffic has been reflected in the net ton miles as well as goods train miles, as may be seen from the figures given below:

(Figures in millions)

	1956-7	1957-8
Net ton miles†	39,910	44·495
Goods train miles	86·62*	91·01

*Revised.

† Excludes traffic carried in departmental trains.

Movement *via* important junctions like Mughalsarai, Bezwada, Waltair and Raichur, recorded appreciable increase as will be seen from the following figures:

	Movement of wagons (4-wheelers) *via* important junction — Daily average	
	1956-7	1957-8
Mughalsarai		
Eastern to Northern	1,881	2,037
Northern to Eastern	1,813	1,979
Bezwada		
Central to Southern	251	267
Southern to Central	255	271
Waltair		
South Eastern to Southern	260	271
Southern to South Eastern	255	264
Raichur		
Central to Southern	189	196
Southern to Central	192	191

By maintaining increased movement of traffic from the Broad gauge to the Metre gauge *via* Manduadih, Sabarmati, Viramgam, Arkonam, Mokameh Ghat, Bhagalpur and Sakrigalighat, it was possible to ease greatly booking *via* these routes. From the comparative figures of traffic transhipped given below, it will be seen that the movement throughout *via* these transhipment points has increased.

	Daily average of Broad gauge wagons transhipped	
	1956-7	1957-8
Manduadih	159	176
Sabarmati	132	160
Viramgam	95	112
Arkonam	54	59
Mokameh Ghat	97	103
Bhagalpur	35	47
Sakrigalighat	31	42

Outstanding registrations.—The table below will show that there was an appreciable improvement in the outstanding registrations in terms of wagon loads awaiting clearance at the end of the year under review when compared with the previous year:

	31 March 1957	31 March 1958	Dec. per cent over 31 March 1957
Broad gauge	67,454	57,356	15·0
Metre gauge	69,178	25,444	63·2

53. Goods train operation.—As compared with the previous year, goods train miles on the Broad gauge increased by 4.09 per cent, wagon miles by 6.71 per cent and net ton miles by 10.7 per cent. On the Metre gauge also there has been an increase of 8.29 per cent in train miles, 12.7 per cent in wagon miles and 16.1 per cent in net ton miles. The table below gives the comparative figures for the year 1956-7 and 1957-8:

TRAIN MILES, WAGON MILES AND TON MILES DURING 1956-7 AND 1957-8* (GOVERNMENT RAILWAYS)

(Figures in millions)

	1956-7	1957-8	Inc. per cent over 1956-7
Broad gauge—			
Train miles—Goods (including proportion of mixed)	60·95†	63·44	4·09
Wagon miles	2,850·4	3,041·6	6·71
Ton miles	33,857·9	37,494·5	10·7
Metre gauge—			
Train miles—Goods (including proportion of mixed)	22·96	24·87	8·29
Wagon miles	826·4	931·0	12·7
Ton miles	5,897·9	6,845·6	16·1

*Excludes departmental.
† Revised figure.

54. Movement of certain commodities by block trains.—Block trains, *i.e.*, trains with full loads of commodities originating from specific areas or stations, continued to be operated as in previous years. The percentage of total wagons moved by such block trains to the total number of wagons loaded on Broad gauge railways, excluding coal and coke and railway stores and materials was 5.16 as against 4.20 during 1956-7. The corresponding percentage on the Metre gauge railways was 7.00 as against 6.2.

55. Transport of coal.—During the year under review the control and distribution of coal continued through the Coal Controller's office under the Administrative control of the Ministry of Steel, Mines and Fuel (Department of Mines and Fuel).

There was a general improvement in the loadings from all coalfields as compared with the previous year. In all 1,686,139 wagons (in terms of Broad gauge) were loaded during the year under review showing an increase of 5.5 per cent as compared to the loadings of the previous year. From West Bengal and Bihar coalfields alone, 1,350,562 wagons were loaded representing an increase of 5.7 per cent. The loadings from Pench and Chanda, Orissa (ex-Talchar) and Singareni fields showed increases of 8.81, 4.8 and 10.1 per cent respectively.

The daily average wagon supply in the direction above Mughalsarai also showed considerable improvement in as much as 1,525 wagons were moved *via* Mughalsarai as against the minimum guarantee of 1,450 wagons per day. The movement during the preceding year averaged only 1,399 wagons per day.

Additional supplies of brick-burning coal to the flood affected areas in the State of West Bengal were made from November 1956 to June 1957. Similarly, movements of brick burning coal on account of U.P. Government, which started from the end of January 1957 continued up to July 1957.

The fixed loco coal programme introduced in the middle of November 1956, by the Coal Controller, continued during the year under review. Under this system, which provides for regular and adequate coal supplies to the Railways, certain collieries in the Bengal and Bihar coalfields were selected

with larger raising capacity on the basis of the quality and quantity of coal required by the Railways. These collieries were required to load a fixed number of wagons regardless of indents. Movements to the respective Railways took place *via* the various routes according to the quotas prescribed for the purpose.

As a step towards rationalising coal transport both on Railway and public account, movement of coal was programmed in block rakes from West Bengal and Bihar coalfields on the Eastern and South Eastern Railways and from Korea and Rewa coalfields on the South Eastern Railway. During the year under review, 4,398 block rakes from West Bengal and Bihar coalfields and 880 block rakes from Korea and Rewa coalfields were arranged which represent an increase of 41 per cent and 5 per cent respectively over the last year's performance. Movements to the mechanical berth at K.P. Docks were also arranged in block rakes of opens and a total of 129 block rakes were arranged *ex.* Ondal and a total of 99 *ex.* Radhanagar.

56. Working of the revised procedure for clearance of goods traffic introduced with effect from 17 August 1953.—As the demands for movement of traffic continued to be in excess of the available rail transport capacity in some areas, the system of rationing of rail transport was continued during the year 1957-8. The Preferential Traffic Schedule as revised from 17 August 1953, apart from making provision for the movement of all raw materials and finished products for certain basic industries, such as, textiles, cement, iron and steel and sugar, also provided for the movement of all other commodities in varying quantities by specifying separate quotas for each such commodity. This step, while ensuring expeditious movement of all Government sponsored traffic, also enabled all types of traffic to have a share in the available transport capacity and served the needs of the overall economy of the country in a more satisfactory manner.

57. Wagon position, Broad gauge wagon pool.—The number of public service wagons (in terms of 4-wheelers) in use on all Indian Railways in the wagon pool at the end of the year 1957-8 was 197,515 or 15,639 more than that at the end of the previous year representing an increase of 7.9 per cent. The total number of wagons loaded during the year was 5,464,531 which represents an increase of 253,862 wagons or 4.87 per cent as compared with the previous year. In spite of increased loadings, demands for wagons were in excess of wagon availability particularly during the busy season.

58. Wagon position, Metre gauge wagon pool.—

(a) **Northen System.**—The number of public service wagons (in terms of 4-wheelers) owned by the Northern, North Eastern, and Western Railways on 31 March 1958 was 71,246 or 5,389 wagons more than the number on 31 March 1957 which represents an increase of 7.5 per cent. The total number of wagons loaded during the year was 2,441,324 or an increase of 189,532 wagons or 8.4 per cent as compared with the previous year. Here also in spite of the increased loadings, demands were in excess of supply during the busy season.

(b) **Southern System.**—The total number of Metre gauge public traffic wagons (in terms of 4-wheelers) owned by the Southern and Central Railways on 31 March 1958 was 22,218, *i.e.*, 2,412 wagons more than as on 31 March last year which represents an increase of 10.8 per cent. The total number of wagons loaded during the year was 964,203 being an increase of 51,214 wagons or 5.6 per cent as compared with the previous year. Here also in spite of increased loadings, demands in certain areas, although mostly current, were in excess of supply.

59. Interchange with Pakistan Railways.—Indian Railways continued to interchange traffic with the Pakistan Railways. The Indian Railways made over to the Pakistan Railways 82,655 Broad gauge wagons including 67,765 loaded and 25,403 Metre gauge wagons including 15,951 loaded as against a total of 83,076 Broad gauge wagons including 43,977 loaded and 25,308 Metre gauge wagons including 23,895 loaded received from the Pakistan Railways. The Pakistan Railways were a debtor to the Indian Railways to the extent of an average of 236 Broad gauge and 206 Metre gauge wagons daily during the year.

60. Neutral control examination of wagons at interchange junctions, etc.—The system of Neutral Control Examination of wagons under the Director of Wagon Interchange was in force at the following points:

I. *Interchange Junctions*

Broad gauge

Agra Cantt.	Ghaziabad*
Agra East Bank	Kanpur (GMC)
Ajni (Nagpur)	Khanalampura*
Chheoki	New Delhi
East Dock Junction	Waltair

*Neutral control has been continued at these points though these stations ceased to be Interchange Junctions.

II. *Workshops*

Broad gauge

Alambagh	Lallaguda (from 10 June 1957)
Jagadhri	Lillooah
Jhansi	Matunga
Kanchrapara	Parel (Mahalaxmi)
Khargpur	Perambur

Metre gauge

Ajmer	Gorakhpur
Golden Rock	Hubli

III. *Repair depots*

Metre gauge

Mehsana

IV. *Marshalling yards*

Mughalsarai	Tondiarpet

V. *Sick Lines*

Broad gauge

Howrah Goods	Lucknow

Metre gauge

Gorakhpur

Flying Squad.—A flying squad of Neutral Control staff continued to be attached to the Head Office for the purpose of carrying out spot checks on the condition of wagon stock at train examining stations on all Indian Railways from time to time.

61. Improvement in marshalling and other yards and their working.—To cope with the increase in traffic, additions and alterations to the following yards were undertaken during 1957-8:

Central

Agra Cantt.
*Dhond
Dornakal
*Gwalior
Hotgi
*Jukehi
*Katni
Kazipet
*Madan Mahal

*Major works were undertaken at these yards

Eastern

Asansol
Bandel
Barabani
Barakar
Budge-Budge
Burdwan
Chitpur
Dinapore
Dum-Dum Jn.
Gomoh
Hirapur
Howrah
Jamalpur
Jhajha
Katrasgarh
Lillooah Sorting Yard
*Mughalsarai
Murshidabad
Naihati
*Ondal
Pakur
*Pathardihi
Patna Jn.
Rampore Haut
Sahibganj
Sealdah
Sindri Marshalling Yard
Sitarampur

Northern

Amroha, Nagaria Sadat
*Bhagat-Ki-Kothi
Bhitaura
Chunar Station
Clutter Buckganj
Dayabasti
Fetehpur
Harduaganj
Juhi
Lucknow
Mohanlalganj
Moradabad
Pratapgarh
*Rewari
Sakurbasti
*Tughlakabad
*Tundla
Varanasi
Yamuna Bridge
Zafarabad

North Eastern

Aishbagh
*Chupra
Garhara
Gonda
Gorakhpur
Muzaffarpur
Samastipur

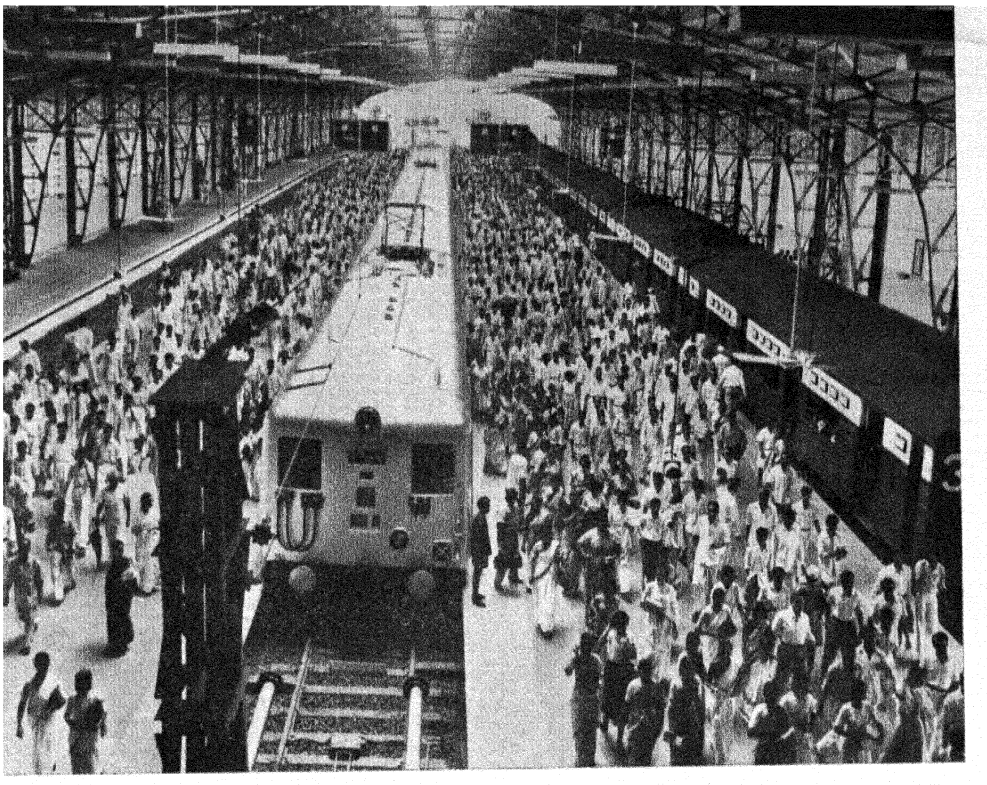
Northeast Frontier

*Alipur Duar
*Katihar
*Siliguri
*Tinsukia

Southern

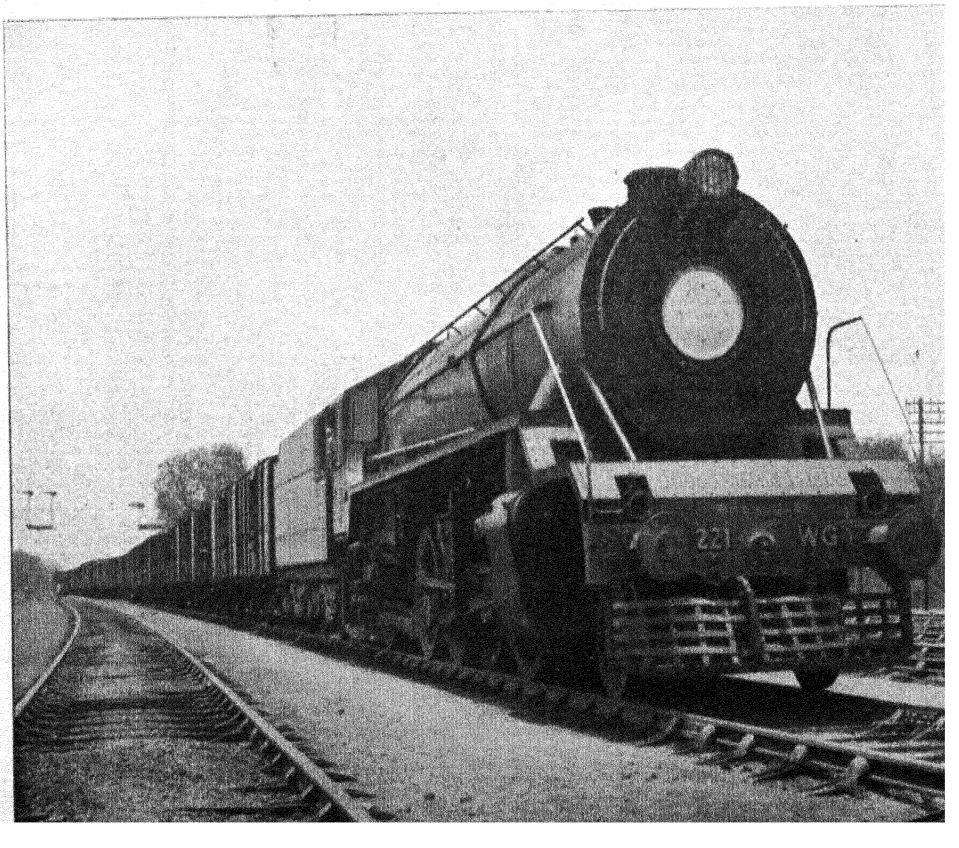
Anakapalle
Arkonam
Arsikere
Bangalore City
Belgaum
Bellary
Bhadravati
Bitragunta
Calicut
Dharamavaram
Donakonda
Dronachellam
Erode
Koregaon
Madras Beach
Madras Egmore
Madukkarai
Manamadurai
Miraj
Pakala
Podanur
Punalur
Raichur
Rajahmundry
Shoranur
Tadepalligudem

*Major works were undertaken at these yards.



PEAK HOUR AT THE NEW CHURCHGATE STATION—WESTERN RAILWAY

A VIEW OF THE GOODS CRACK SPECIAL RECENTLY INTRODUCED—NORTHERN RAILWA



Southern—contd.

Gadag	Tenali
Ghorpuri	Tiruturaipundi
Gudur	Tiruvarur
Guntakal	Tondiarpet Marshalling Yard
Hospet	Vijayawada
Hubli	Yesvantpur
Jalarpet	

South Eastern

*Adityapur (Tatanagar)	Burnpore
Anara	Gua
Bhilai	*Jamadoba
Bijuri	Sahdol
Bondomunda	

Western

*Agra Fort	Mehsana
*Ahmedabad	*Palanpur
Bandra	Phulera
*Baroda passenger Yard	Ratlam
*Bombay Central	Sabarmati
Botad	*Sawai-Madhopur
*Bulsar	Surendranagar
Godhra	*Udhna
Hapa	Ujjain
*Jaipur	*Viramgam
Jogeshwari	

* Major works were undertaken at these yards.

Improvement in operation at marshalling yards has been brought about by various steps, such as, reduction in detention to wagons and engines, rationalized distribution of marshalling works, etc. Marshalling orders in force at important yards were revised in the light of experience gained during the previous year. Particular attention was paid to marshalling as many block trains as possible to the farthest points. Improved operation at the marshalling yards enabled additional traffic to be handled efficiently.

62. **Progress made in the introduction of Express Goods Trains.**—A close watch was maintained on the punctual running of express goods trains. Additional express goods trains were also introduced on important sections and the frequency of service was increased on certain routes. Details of express goods trains which ran during the year under review are given below :

From	To	Frequency
	(a) *Broad gauge*	
Central/Southern—		
Wadi Bunder	Madras	Bi-weekly
Madras	Wadi Bunder	,,
Southern/Central/Northern—		
Madras	New Delhi	Tri-weekly
Central/South Eastern—		
Wadi Bunder	Shalimar	Bi-weekly
Shalimar	Wadi Bunder	Weekly
Eastern/Northern—		
Howrah	Delhi	Weekly—(*via* the Main line of Eastern Railway)
Delhi	Howrah	,, ,,
Howrah	Kanpur	,, ,,
Howrah	Lucknow	,, ,,
Delhi	Howrah	Daily (*via* the Grand Chord Section of Eastern Railway)
Howrah	Delhi	,, ,,

From	To	Frequency
	(a) *Broad gauge*—contd.	
Southern/South Eastern—		
Shalimar	Madras	Weekly
Madras	Shalimar	Bi-weekly
Northern/Central/Western—		
Ahmedabad	New Delhi	Saturdays
New Delhi	Ahmedabad	Tuesdays and Fridays
New Delhi	Bombay (Carnac Bridge)	Tuesdays and Fridays
Bombay (Carnac Bridge)	New Delhi	Daily except Sundays
Central—		
Wadi Bunder	Secunderabad	Weekly
Secunderabad	Wadi Bunder	,,
Wadi Bunder	Kanpur	,,
Eastern—		
Asansol	Mughalsarai	Daily (*via* Main line)
Mughalsarai	Asansol	,, ,,
Chitpur	Mughalsarai	,, ,,
Mughalsarai	Chitpur	,, ,,
Chitpur	Jamalpur	Daily (Due to dearth of traffic offering for the loop section, these trains could not be run daily)
Jamalpur—	Chitpur	,,
Northern		
Delhi	Amritsar	,,
Amritsar	Delhi	,,
Southern—		
Madras	Bangalore City	Bi-weekly
Bangalore City	Madras	,,
Madras	Cochin Harbour Terminus	,,
Cochin Harbour Terminus	Madras	,,
Mangalore	Cochin Harbour T rminus	,,
Cochin Harbour Terminus	Mangalore	,,
Madras	Bangalore City	5 days in a week (non-guaranteed)
Bangalore City	Madras	,,
South Eastern—		
Shalimar	Jharsuguda	Weekly
Jharsuguda	Shalimar	,,
Shalimar	Khurda Road	,,
Khurda Road	Shalimar	,,
Shalimar	Waltair	,,
Waltair	Shalimar	,,
Shalimar	Nagpur	,,
Nagpur	Shalimar	,,
Western—		
Bombay (Carnac Bridge)	Ahmedabad	Daily except Sundays
Ahmedabad	Bombay (Carnac Bridge)	,,
	(b) *Metre gauge*	
Western/Northern—		
Rajkot	Bikaner	Saturdays
North Eastern—		
Kanpur Anwarganj	Siliguri Jn.	Daily
Siliguri Jn.	Kanpur Anwarganj	,,
Siliguri Jn.	Tinsukia	Bi-weekly
Tinsukia	Siliguri	,,
Manduadih	Samastipur	Daily
Samastipur	Manduadih	,,
Barauni Jn.	Darbhanga	,,
Darbhanga	Barauni Jn.	,,
Savan	Manduadih	,,
Manduadih	Savan	,,
Muzaffarpur	Manduadih	,,
Manduadih	Muzaffarpur	,,

From	To	Frequency
	(b) *Metre gauge*—contd.	
Southern—		
Madras Beach	Tuticorin	Bi-weekly
Tuticorin	Madras Beach	,,
Madras Beach	Tuticorin	5 days in a week.
Tuticorin	Madras Beach	
Bangalore City	Poona	Bi-weekly
Poona	Bangalore City	,,
Western—		
Kandla (Gandhidham)	Jaipur	Mondays
Jaipur	Kandla (Gandhidham)	,,
Surendranagar	Jaipur	,,
Jaipur	Surendranagar	,,
Ahmedabad	Jaipur	Saturdays
Jaipur	Ahmedabad	,,

63. Running of Air-conditioned Express Trains.—The Air-conditioned Express trains have been running, twice a week, from October 1956 between Howrah and New Delhi, from December 1956 between Bombay Central and New Delhi, and from February 1957 between Madras Central and New Delhi.

Prior to February 1958, each of these trains consisted of one First class air-conditioned coach, one air-conditioned dining car and three air-conditioned chair cars, besides two generator car-*cum*-brake vans.

Due to less traffic, one air-conditioned chair car was removed, with effect from February 1958, from each of the three services, as a temporary measure, and replaced by three ordinary Third class coaches. Thus the loads of these trains were augmented from seven bogies to nine bogies on all the routes.

As these trains are the fastest on their respective routes, it means that on these routes, besides helping to reduce the overcrowding in Third class in the long distance trains, the new arrangement has provided the Third class passengers with a substantially faster service than hitherto available to them.

64. Export traffic.—During the year, special attention was paid to the movement of export traffic to the various ports so that it could move expeditiously. Programmes for movement of iron and manganese ores for export were drawn up in consultation with the State Trading Corporation of India (Private) Ltd., keeping in view the handling capacity of the various ports. The Railways endeavoured to implement these programmes to the maximum possible extent. Movement of ore traffic to Calcutta port was, however, affected due to engineering works in progress in connection with the doubling of track between Barajamda and Rajkharsawan.

The stock of iron and manganese ore awaiting shipment in the port areas generally showed an upward trend, except at Calcutta as will be seen from the following figures :

GROUND BALANCES OF MANGANESE AND IRON ORE AWAITING SHIPMENT IN PORTS

Port	On 31 March 1957		On 31 March 1958	
	Manganese Ore (Tons)	Iron Ore (Tons)	Manganese Ore (Tons)	Iron Ore (Tons)
Calcutta	105,445	90,017	89,903	73,566
Bombay	44,600	7,100	83,144	5,000
Madras	54,926	76,012	54,543	117,877
Vizagapatam	176,539	63,950	253,672	16,119

In the interest of expeditious clearance of export consignments, a procedure was laid down whereby the Directorate of Export Promotion, Ministry of Commerce and Industry, was authorized to sponsor cases of wagon space and priority movements where full wagon loads were intended to be despatched to dockside stations and the required facilities could not be secured in spite of normal efforts of the trade. A careful and sustained watch on the prompt clearance of traffic to ports for export was maintained both by the Railways and the Railway Board. As a result, demands for these movements were met without undue delay.

The movement of iron and manganese ores in terms of wagons from different areas to different ports during 1957-8 as compared with 1956-7 was as under:

	Manganese Ore			Iron Ore	
	Broad gauge	Metre gauge	Narrow gauge	Broad gauge	Metre gauge
1956-7	52,824	22,111	15,058	36,019	31,748
1957-8	**59,483**	**22,771**	**13,332***	**44,689**	**44,189**

*The decrease in the movement of manganese ore in 1957-8 is on account of lesser demands in Madhya Pradesh area.

65. Clearance of traffic from ports.—During the year under review, the clearance from the various ports of imported goods including railway materials, foodgrains, fertilizers and iron and steel, etc., received the close attention of Railway Administrations serving the ports. Due to failure of rains in some of the important rice producing areas in the country, there was heavy movement of imported foodgrains from different ports to the interior, particularly to Bihar, North Bengal and eastern districts of U.P. Monthly programmes of anticipated arrival and despatch of foodgrains and fertilizers indicating daily average number of wagons required for transport by rail were made out by the Ministry of Food and Agriculture and were implemented by the Railways concerned, under high priority.

The quantity of imported foodgrains, fertilizers and iron and steel materials cleared from important ports during the year is as under:—

(Figures in tons)

Port	Foodgrains	Fertilizers	Prime steel (joints, rods angles, channels, etc.)	Non-Prime steel Machinery, etc
Calcutta	559,324	8,796	515,484	371,447
Bombay	1,198,570	128,475	257,447	68,660
Vizagapatam	141,940	26,557	5,852	60,663
Madras	154,126*	28,787*	92,071	56,803

* Indicates figures from 1 July 1957.

A high level committee for the movement of foodgrains was formed in August 1957 at Secretariat level represented by Ministry of Food, Railways, Transport and Finance. The main idea of setting up this high level committee was to draw up a co-ordinated plan for food movements taking into account the requirements of foodgrains in various parts of the country. Four meetings of this committee were held in 1957-8.

The import of iron and steel materials including machinery and oversized consignments increased considerably during the period under review. Arrangements were made for the supply of special type of wagons to ensure that movements of materials to important projects such as Bhilai, Rourkela, etc., were carried out as expeditiously as possible.

The Director, Rail Movements, Calcutta, continued to function as the co-ordinating authority for ensuring expeditious clearance of imported materials, particularly iron and steel.

66. Wagon usage.—Net ton miles moved per wagon day recorded an increase from 570 in 1956-7 to 586 in 1957-8 on the Broad gauge and from 210 in 1956-7 to 225 in 1957-8 on the Metre gauge. Wagon miles per wagon day, however, showed a slight decrease on the Broad gauge from 47.8 in 1956-7 to 47.3 in 1957-8. On the Metre gauge this figure improved from 28.7

in 1956-7 to 30.1 in 1957-8. On the Broad gauge, a large number of development works on the various Railways designed to increase carrying capacity over congested sections and through heavily worked yards adversely affected this figure.

The percentage of wagons under or awaiting repairs in mechanical and transportation workshops and sick lines to the total goods stock on line improved both on Broad and Metre gauges from 3.79 per cent in 1956-7 to 3.53 per cent in 1957-8 and 5.02 to 3.96 per cent respectively.

67. Wagons loaded with 'smalls'.—The proportion of wagons loaded with 'smalls' traffic to the total number of wagons loaded during 1957-8 as compared with 1956-7 registered a slight decrease on both the Broad and Metre gauges as will be seen from the table below :—

NUMBER OF WAGONS LOADED WITH 'SMALLS' (GOVERNMENT RAILWAYS)

	Number		Percentage of total number of wagons loaded	
	1956-7	1957-8	1956-7	1957-8
Broad gauge	427,779*	397,967	8·21*	7·28
Metre gauge	338,362*	297,616	10·7*	8·74

*Revised.

68. Goods train speeds.—Speeds of goods trains were generally affected by increased density of traffic particularly on sections already working to full capacity and on account of extensive remodelling works undertaken on practically all the Railways. Acute hot weather conditions during the summer of 1957-8, the influenza epidemic in North India in May and June 1957, and breaches on the North-east line of the Southern Railway in November 1957 had serious repercussions on goods train movement. On the Broad gauge, speed of "all goods trains" was 9.28 miles per hour in 1957-8 against 9.60 miles per hour in 1956-7 and on the Metre gauge 8.23 miles per hour in 1957-8 against 8.27 in 1956-7.

69. Goods train loads.—The average net load of goods trains increased as compared with the previous year by 35 tons from 554 to 589 tons on the Broad gauge and by 18 tons from 257 to 275 tons on the Metre gauge in 1957-8.

70. Engine usage.—Efforts to improve the power position on Government Railways resulted during the year in an increase in the number of engines employed daily on different services and in the total engine miles run. It will be seen from the figures included in the following table that there had been an increase of the order of 3.51 per cent and 4.20 per cent on the Broad gauge and of 7.07 per cent and 6.39 per cent on the Metre gauge in the average number of engines in use daily and in total engine miles respectively. The engine miles per day per engine in use increased by 0.91 per cent on the Broad gauge but remained at the same level in the case of the Metre gauge as during the previous year.

ENGINE USAGE ON GOVERNMENT RAILWAYS (STEAM SERVICE)

Particulars.	Broad gauge		Inc. per cent over	Metre gauge		Inc. per cent over
	1956-7	1957-8	1956-7	1956-7	1957-8	1956-7
Average No. of engines in use daily on different services	4,365	4,518	3·51	2,236	2,394	7·07
Total engine miles (in thousands)	173,941*	181,242	4·20	82,591	87,872	6·39
Engine miles per day per engine in use	110	111	0·91	102	102	—

*Revised.

71. **Engine performance (Steam).**—Engine miles per day per engine on line (inclusive of the engines under repairs, etc.,) registered a slight improvement from 83 to 84 miles on the Broad gauge but on the Metre gauge the figures deteriorated from 76 to 74 during 1957-8 as compared with the previous year. The percentage of locomotives under or awaiting repairs in mechanical and transportation workshops to the total number on line decreased from 15.8 to 15.3 per cent on the Broad gauge and from 15.9 to 15.7 per cent on the Metre gauge during this period.

The amount of revenue-earning work done by goods locomotives expressed by the statistical unit net ton miles per goods locomotive day in use or line recorded improvement of 5.32 and 6.12 per cent on the Broad gauge and of 6.57 and 5.87 per cent on the Metre gauge respectively.

NET TON MILES PER LOCOMOTIVE DAY (STEAM)
(GOVERNMENT RAILWAYS)

—	Net ton miles			
	Broad gauge		Metre gauge	
	Per goods locomotive day on line	Per goods locomotive day in use	Per goods locomotive day on line	Per goods locomotive day in use
1956-7	22,315	32,666	9,360	14,505
1957-8	**23,680**	**34,404**	**9,909**	**15,458**
Inc. per cent over 1956-7	6·12	5·32	5·87	6·57

Details of engine usage are shown in statement No. 22 of Volume II of this Report.

72. **Shunting miles.**—Unproductive engine miles classified under the heads 'Other engine mileage' and 'shunting miles' taken together showed during the year a slight increase from 23.0 to 23.4 per cent of the total engine mileage as compared with the previous year.

Shunting miles, forming the greater portion of such unproductive mileage amounted to 15.6 per cent of the total engine miles as against 15.3 per cent during the year 1956-7. The following table shows the ratio per 100 train miles of passenger and goods shunting miles on Government Railways during 1957-8 as compared with 1956-7.

SHUNTING MILEAGE DURING 1956-7 AND 1957-8
(GOVERNMENT RAILWAYS)

Shunting miles per 100 train miles	1956-7	**1957-8**	Inc. per cent over 1956-7
Passenger and proportion of mixed—			
Broad gauge	6·46	**6·53**	1·08
Metre gauge	5·78	**6·02**	4·15
Goods and proportion of mixed—			
Broad gauge	38·8	**39·4**	1·55
Metre gauge	43·2	**44·1**	2·08

73. **Withdrawal of Second class accommodation from trains.**—Second class accommodation was abolished on the Calcutta and Madras suburban sections with effect from 1 July 1957 in pursuance of the policy of reducing the number of classes of travel.

74. **Coal supplies and consumption—**

(i) *General.*—Efforts continued to be made during the year to bring about an improvement in Railway coal supplies both in respect of quantity and quality and to secure, as far as possible under the existing supply arrangements, a more satisfactory and expeditious disposal of complaints made by Railways in regard to supplies of coal inferior to the specified grades.

(ii) *Supplies and stocks.*—The stocks of steam coal on Indian Government Railways remained below the target of 21.7 days consumption throughout

the year. The stocks stood at 9.1 days consumption requirements at the beginning of the year, rose to 13.6 days level by 30 June 1957, and declined to 12.6 days stock by 31 July 1957. There was a steady rise to 19.8 days requirements by 20 November, which was the highest level reached during the year. Again a deterioration set in and the stocks dropped to 14.4 days level by the end of the year.

Stocks on the Central and Western Railways and on the Pandu Region of the North Eastern Railway remained unsatisfactory almost throughout the year, owing to transport difficulties arising out of unavoidable operating restrictions and limitations imposed from time to time. Special efforts were made to improve supplies to the Central and Western Railways by running block loads of coal *via* Chheoki, Nagpur and Agra East Bank (B.G.) and some other junctions, and by diverting some of the coal consigned to the Northern Railway. Additional supplies of coal from West Bengal and Bihar coalfields by rail-*cum*-river route and from Assam collieries were arranged for the Pandu Region of the North Eastern Railway. Stocks on the Southern Railway remained below the minimum level during the first half of the year due to short supplies by sea route on account of shipping difficulties. To make up the shortfall in sea-borne supplies of coal, additional supplies were made by rail to the Southern Railway from West Bengal and Bihar coalfields *via* Waltair and from Singareni coalfields *via* Bezwada.

(iii) *Consumption.*—The total quantity of coal consumed on all Indian Railways, the Ganga Bridge Project, and the Chittaranjan Locomotive Works during the year under review as compared with the previous year is given below:

	Tons 1956-7	Tons 1957-8
Government Railways*	13,160,236†	13,999,788
Non-Government Railways	63,462	57,768
Total	13,223,698†	14,057,556

*Includes 10,622 tons and 9,396 tons for the year 1956-7 and 1957-8 respectively consumed by the Ganga Bridge Project and the Chittaranjan Locomotive Works.

†Revised.

The gradewise distribution is as follows :—

	Tons 1956-7	Tons* 1957-8
Selected 'A'	1,190,919	1,436,239
Selected 'B'	3,092,997	3,274,370
Grade I	3,880,064	4,488,955
Grade II	1,220,633	700,978
Grade III A	300	--
Grade III B	162	1,575
Ungraded coal	3,303,019	3,611,756
Small coal	535,604	543,683
Total	13,223,698	14,057,556

* Provisional

(iv) *Production and despatches by rail.*—Coal mined in various States in India during the year 1957-8 amounted to 44.07 million tons against 40.31 million tons mined in 1956-7. The total quantity of coal carried by rail during 1957-8 was 40.52 million tons. Out of this 33.46 million tons of coal were carried by the Eastern and South Eastern Railways, which was 1.38 million tons more than the quantity carried during the preceding year.

(v) *Procurement and inspection.*—It was decided in consultation with the Ministry of Steel, Mines and Fuel that Railways would procure their supplies of coal under contracts with individual collieries, nominated by the

Coal Controller, and would also undertake the inspection. A contract form was finalised in consultation with the Coal Controller and the Ministry of Law. A proposal for a Railway Coal Inspectorate at Dhanbad was drawn up in consultation with the Chief Mining Adviser for Railways. The contract system could not, however, be introduced due to objections raised by the collieries. The matter continued to be pursued.

75. Coal Economy Measures—

(i) *Expert Committee on coal consumption on Railways.*—In accordance with the assurance given by the Minister for Railways to Parliament in August 1957, the Ministry of railways appointed an 'Expert Committee on Coal Consumption on Railways' in November 1957 to study the railway coal problems according to the following terms of reference:

I. To examine and to report on the factors responsible for increase in railway expenditure on coal, commenting particularly on—
   (i) the extent to which the quality of coal is responsible for increase in consumption and expenditure and for poor performance ;
   (ii) the expenditure incurred on handling charges keeping in view the lead and lift involved ;
   (iii) the comparative merits and demerits of employing departmental or contract labour for coal handling ;
   (iv) the causes and quantum of wastage and losses of coal in transit, in sheds and otherwise ; and
   (v) the extent to which the increase in expenditure on coal is due to increase in traffic, coal prices, freight charges on coal, etc.

II. To examine the Railways' future requirements of high grade coal for steam traction and the prospects of adequate supplies and to recommend measures for meeting any anticipated shortages.

The Committee consisted of Member Engineering, Railway Board as Chairman, and Directors, Mechanical Engineering and Transportation, Railway Board, Deputy Director General, Council of Scientific and Industrial Research, New Delhi, Coal Controller, Calcutta and Director, Fuel Research Institute, Dhanbad as Members, Senior Deputy General Manager, Central Railway, Bombay was to function as Member-Secretary, and Joint Director, Mechanical Engineering (Coal), Railway Board to give technical assistance to the Committee.

The Committee issued a questionnaire to the Railways, the Coal Controller, the Director, Geological Survey of India, and others concerned and the examination of the replies received was completed during the year under review.

(ii) *Fuel Control Organisations.*—The progress in building up the fuel control organisations on Railways was satisfactory. The Central, Eastern, Southern and South Eastern Railways completed the organisations according to the prescribed scale. The North Eastern and Northern Railways had difficulties in filling the posts of Instructor Firemen due to dearth of suitable personnel.

(iii) *Pilot Divisions/Districts.*—Detailed instructions were issued to Railways regarding the introduction of fuel economy measures in the nine Pilot Divisions relating to coal consumption in shed services, consumption in train services, maintenance of locomotives, quality of coal, standard of firing, fuel accounting, and fuel statistics.

(iv) *Training of staff.*—The training of power running staff on Railways progressed satisfactorily.

Central Fuel Training School.—The Central Fuel Training School started functioning at Jamalpur with effect from 1 November 1957, pending the setting up of the permanent school at Dhanbad. Two fuel economy courses for Loco/Fuel Inspectors were completed and the third course was started during the year under review.

Mobile training unit.—Work regarding the conversion of an unserviceable coach into a Mobile Training Car was completed and the mobile unit was placed at the disposal of the Central Fuel Training School, Jamalpur, for giving demonstration to trainees under service conditions.

(v) *Cinders and ashes.*—Detailed instructions were issued to Railways regarding the reclamation and utilization of cinders and disposal of residual ashes.

(vi) *Fuel performance.*—The fuel performance in the main line services showed improvement on most of the Railways. There was, however, a slight deterioration on the Eastern, Southern and Western Railways on the Broad gauge and on the Central and Southern Railways on the Metre gauge in respect of the passenger and proportion of mixed services. In the case of the goods and proportion of mixed services, except for the Western Railway on the Broad gauge and the Southern Railway on both the gauges which showed slight deterioration, all the other railways showed definite decrease in fuel consumption.

(vii) *Miscellaneous—*

Consumption targets.—The targets for coal consumptions were revised and circulated to Railways for adoption. Fuel performances of different Railways were watched in relation to prescribed targets.

Fuel statistics.—A new proforma for the presentation of fuel statistics, which would facilitate control over losses, was circulated to Railways for trial.

Interception of coal wagons.—Supplementary instructions were issued to Railways to avoid interception of coal wagons, particularly those consigned to non-Railway consumers. There was a decline in the number of cases of interceptions.

Departmental Committees and Sub-Committees.—The Railway Board was represented on the following Committees and Sub-Committees:

(1) Requirements and Utilization Committee of the Coal Council of India, Ministry of Steel, Mines and Fuel.
(2) Production and Preparation Committee of the Coal Council of India, Ministry of Steel, Mines and Fuel.
(3) Coal Advisory Committee under the Coal Controller.
(4) Executive Committee of the Central Fuel Research Institute.
(5) Indian Standards Institutions:
  (i) Steam Cylinder Oils Sub-Committee.
  (ii) Solid Mineral Fuel Sectional Committee.
  (iii) Sub-Committee on sampling.
  (iv) Sub-Committee on standards and sizes.
  (v) Sub-Committee on Terminology and Classification of coal.
  (vi) Sub-Committee on coke.

B. COMMERCIAL

76. Railway Freight Structure Enquiry Committee.—The Report of the Railway Freight Structure Enquiry Committee in its final and complete form was received by the Government in May 1957. The report was released to the public on 11 December 1957 and copies thereof were placed on sale with the General Secretary, Indian Railways Conference Association, New Delhi.

Examination of the Committee's recommendations relating to the reconstitution, jurisdiction, and rules of procedure of the Railway Rates Tribunal had been completed, and the Government's decisions thereon were included in the Indian Railways (Amendment) Bill, 1957, which was also passed by the Parliament during the year under review.

Substantial progress was also made in regard to the examination of the Committee's recommendations concerning the revision of the freight rate structure on Indian Railways.

77. Alterations in rates and fares—

I. *Goods.*—The following are some of the important changes made in goods freight rates during the year under review:

The supplementary charge of one anna per rupee on the total freight leviable on all goods except grains and pulses, fodder, manures, *khadi,* newspapers, newsprint and books was enhanced to two annas per rupee with effect from 1 July 1957. Milk was also exempted from the levy of supplementary charge from the same date.

(a) The practice of levying freight on goods traffic on inflated distance over the following sections was discontinued with effect from 15 September 1957:

(i) Jhagadia-Netrang section of the Western Railway.

(ii) Barsi Light Railway Section of the Central Railway.

(iii) Hardwar-Dehra Dun section of the Northern Railway.

(b) The rate of inflation of distance for charge over the following sections was reduced.

(i) Zankhavav-Umarpada extension of the Kosamba Zankhavav section of the Western Railway—Reduced from 2 $\frac{1}{10}$ times to 1$\frac{1}{2}$ times.

(ii) Neral-Matheran section of the Central Railway—Reduced from 12 times to 9 times.

(iii) Kangra Valley and Kalka-Simla sections of the Northern Railway—Reduced from 4 times to 3 times.

(iv) Nilgiri section of the Southern Railway—Reduced from 8 times to 6 times.

(c) With effect from 15 September 1957, the basis of rates for goods traffic over the Darjeeling-Himalayan section of the North Eastern Railway was reduced by about 25 per cent.

(3) The special rate of Re. 0-4-6 per 4-wheeled wagon per mile at owner's risk *plus* full terminals for dry cattle and their calves booked from Bombay, Calcutta and Madras areas, Kanchrapara, Naihati, Sodepore, Ballygunge, Sheoraphuli, Tittaghur, Jubbulpore and Madan Mahal stations to up-country stations for grazing purposes was further extended for a for despatches in the following cases:

(4) Concessional charges at one fourth of the full tariff rates *plus* full terminals, etc., for relief goods intended for free distribution were granted for despatches in the following cases:

(i) to storm-affected areas of the districts of Midnapore and 24-Parganas in West Bengal;

(ii) to famine-stricken areas of Bihar, Eastern Uttar Pradesh, Okha (Kutch) and Gujrat; and

(iii) to flood-affected areas of West Bengal.

(5) Concession of free transport was granted for relief materials intended for free distribution in the flood-affected areas of Ceylon when consigned to the Textile Commissioner, Bombay.

(6) To meet the pressing needs of fodder or forage in the States of Delhi, Uttar Pradesh and Bihar, concessional rates for fodder or forage were quoted on receipt of requests from the State Governments from certain stations on the Central Railway to certain stations on Eastern, Northern, North Eastern and South Eastern Railways.

(7) Other important changes in rates made by individual Railways are summarized below:

(i) Special reduced rates were quoted for Mica from Giridih to K. P. Docks; for Absolute alcohol in tank wagons from (a) Rampur to Sirpur Kaghaznagar, *via* Agra Cantt. and (b) from Daurala to Sirpur Kaghaznagar *via* Agra Cantt.; for Potatoes from

Nagrota to Amritsar, Delhi, Jullundur City, Ludhiana and Pathankot; for Rectified spirit (50 per cent over proof and above) in tank wagons from (a) Daurala to Sirpur Kaghaznagar, *via* Agra Cantt. and (b) from Rampur to Sirpur Kaghaznagar, *via* Agra Cantt; and for Stone from Hardwar to Ayodhya.

(ii) Special rates were cancelled for boxes, cases, casks, tea chests, wooden unassembled with or without fittings from Jagadhri to Howrah and Cossipore Road and from Pathankot to Howrah; for iron or steel Division 'B' from Tatanagar to Jalgaon and Sijua; for tea from certain stations on the Darjeeling-Himalayan Section to *via* Siliguri Junction; for Hemp-machine pressed, hand or power from Mandla Fort and Nampur to Vizianagram; for sugar cane from Donkinavalasa and Komatipalli to Bobbili and Rayaghada and from Kesurga to Rayaghada; and the extra charge of Rs. 2/4/- per 4-wheeled M. G. wagon which was levied in addition to freight charges on certain items of full load traffic booked to or from Jamnagar was also cancelled.

(iii) With effect from 11 November 1957, the date on which Raniwara-Bhildi section of the Northern Railway was opened for goods traffic, mileage for charge for goods traffic was inflated by 90 per cent.

II. *Coaching*—

(a) *Passenger fares*—

(i) There were no changes in the basis of passenger fares during the year. Consequent upon the introduction of decimal coinage from 15 September 1957, the passenger fares were converted into the new (decimal) currency according to the official conversion table. On and from this date, a tax on passenger fares was levied under the provisions of the Railway Passenger Act of 1957, to be credited to Central Revenues. The fares for travel by Rail Motor between Kalka and Simla were also revised from 15 September 1957.

(ii) *Inflated mileage for charge.*—(a) The practice of levying charges on inflated distance was also discontinued with effect from 15 September 1957 over (i) Gwalior-Shivpuri (ii) Hardwar-Dehra Dun (iii) Ujjain-Agar (iv) Gwalior-Sheopurkalan and (v) Kichha-Kathgodam sections and the rate of inflation of distance for charge reduced on Kalka-Simla section from 4 to 3 times; on Kangra Valley section from 2 to 1½ times; on Neral-Matheran section from 4 to 3 times in the case of passenger traffic and from 9 to 7 times in the case of coaching traffic; on Nilgiri section from 3½ times from Mettupalaiyam to Wellington *plus* 2½ times from Wellington to Ootacamund to 2¾ times from Mettupalaiyam to Wellington *plus* 2 times from Wellington to Ootacamund; and on Ambala-Kalka section of the Northern Railway from 2 to 1½ times.

(iii) With effect from 15 September 1957, a new basis of fares over the Darjeeling-Himalayan section of the North Eastern Railway involving a reduction of 25 per cent was also notified.

(b) *Concesssion*—

Concessional return tickets between 15 July 1957 and 15 September 1957 and during Dussehra, Diwali, etc.—Concessional return tickets during the period 15 July to 15 September 1957 and during Dussehra, Diwali and Christmas holidays, and concessions for travel to hill stations and to Kashmir were repeated during this year.

Withdrawal of concessions to employees of tourist agencies.—The rail concession granted to employees of tourist agencies while

travelling on duty for the purpose of making enquiries regarding places likely to be visited by tourist was withdrawn, with effect from 1 July 1957.

Concessions to Blind persons and patients suffering from tuberculosis and cancer.—Blind persons and patients suffering from tuberculosis and cancer when travelling alone were allowed, with effect from 1 July 1957, the concession of single journey tickets in First, Second and Third classes on payment of one quarter of the normal fares due (mail fares being chargeable in the case of Second and Third classes). When travelling accompanied by attendants, the concession of one single journey fare only for both the blind person or patients together with his attendant was allowed. In the case of patients suffering from T. B. and Cancer, the concession is allowed only in respect of their journeys for admission to or on discharge from a recognised sanatorium, hospital or institute.

Commission to recognised tourist agents.—With effect from 1 December 1957 the commission payable to recognised tourist agents on the sale of ordinary tickets was reduced from 5 per cent to $3\frac{3}{4}$ per cent. The commission payable on standard circular tour tickets, excursion special trains and small excursion parties in reserved carriages, however, continued at 5 per cent.

III. *Parcels and Luggage*—

(i) With effect from 1 July 1957 the supplementary charge of one anna in the rupee (in force from 1 April 1956) levied on freight charges on coaching traffic except passengers, was increased to two annas in the rupee. On and from the same date, milk was also exempted from the supplementary charge in addition to *khadi*, newspapers, newsprint and books which were already exempted.

(ii) On the Central Railway with effect from 15 October, 1957 lumpsum wagon rates for 4-wheeled wagon or vehicle were introduced for plantains booked on that Railway and from certain stations on that Railway to certain stations on the Northern Railway in place of the system of charging plantains on floor area basis.

Effect of changes in rates and fares—

Goods traffic.—The year under review is the ninth year since the introduction of the revised rate structure on 1 October 1948. The traffic continued to show a steady increase.

Passenger traffic.—Passenger traffic also continued to show a steady increase.

78. Efforts to secure better wagon usage and wagon loads.—The index of net ton miles per wagon day during the year 1957-8 improved by 2.81 and 7·14 per cent on the Broad and Metre gauges respectively as compared to that for the preceding year. While the index of wagon miles per wagon day recorded an increase of 4.88 per cent on the Metre gauge, the figure for the Broad gauge showed a decrease of 1.05 per cent. The actual figures for the two years are appended below:—

	Broad		Percentage inc. or dec. over 1956-7	Metre		Percentage inc. or dec. over 1956-7
	1956-7	1957-8		1956-7	1957-8	
Net ton miles per wagon day (in terms of 4-wheelers)	570	586	+2·81	210	225	+7·14
Wagon miles per wagon day (in terms of 4-wheelers)	47·8*	47·3	−1·05	28·7	30·1	+4·88

* Revised.

Improvement in these results was achieved not only by continuous efforts to secure better wagon loads and more intensive wagon usage, but

also by improving wagon availability for meeting the increasing demands on transport by reduction in the free time allowed for loading and unloading of wagons from 6 to 5 working hours with effect from 1 November 1956 and other special measures referred to in detail in the annual report for 1954-5 (Para 65 of Chapter III). The slight decline in the index for wagon miles per wagon day on the Broad gauge is attributable principally to the various engineering works in progress particularly on the South Eastern Railway.

79. Co-ordination of rail, road and water transport.—The progress of railway participation in State road transport undertakings and the working thereof during 1957-8 is stated below:

Bombay State.—Statistics in regard to certain important operating and financial aspects of the Bombay State road transport corporation are shown below:

(a) *Passenger services*—

Number of routes operated on	
31 March 1957	1,880
31 March 1958	2,118
Total route mileage in operation on	
31 March 1957	46,559
31 March 1958	54,481
Average monthly vehicle milcage operated in	
1956-7	5.971 million
1957-8	5.748 ,,
Estimated profit	
1956-7	Rs. 112.45 lakhs
1957-8	Rs. 105.60 ,,

During the year under review, a sum of Rs. 19.36 lakhs was paid by the corporation to the Railways as interest at 4½ per cent on the Central Government's investment for the year 1956-7.

(b) *Parcel services.*—The parcel services continued to make steady progress during the year. The average monthly freight amounted to Rs. 28,500 as against an average expenditure of Rs. 10,962 leaving a margin of Rs. 17,538 per month on this account.

(c) *Goods services.*—On the operation of Goods services, despite all efforts towards better utilisation of the trucks, the Corporation incurred a loss of Rs. 21.46 lakhs during the year.

As there was little prospect of running the goods services at a profit, it was decided to reduce the fleet, and accordingly the Corporation sold 300 trucks to the Public Works Department, Government of Bombay on 31 March 1958.

Saurashtra State Road Transport Corporation.—Certain important operating and financial statistics of the corporation are as under:

Number of routes operated on	
31 March 1957	187
31 March 1958	212
Total route mileage in operation on	
31 March 1957	5,493
31 March 1958	6,837
Estimated profit	
1956-7	Rs. 28.50 lakhs
1957-8	Rs. 43.49 lakhs

The Railway's share is 33⅓ per cent of the total capital invested in this corporation.

Kutch State Road Transport Corporation.—Certain important operating and financial statistics of the corporation are as follows:

Number of routes operated on	
31 March 1957	58
31 March 1958	59
Total route mileage in operation on	
31 March 1957	2,176
31 March 1958	2,393
Estimated profit	
1956-7	Rs. 2.15 lakhs
1957-8	Rs. 1.90 ,,

The Railway's share is 20 per cent of the total capital invested in this corporation.

Provincial Transport Services (Nagpur Departmental Undertaking of State Government).—During the year this undertaking showed a profit of Rs. 13.39 lakhs as against Rs. 12.11 lakhs last year. The Railway's share of investment is Rs. 8.47 lakhs in this Undertaking.

Rajasthan State.—The bus services operated by the Bombay State Road Transport Corporation in Abu Road pocket of Palanpur Sub-division were transferred to the Rajasthan Government on and from 1 January 1957. The Railway's share of the capital, so transferred, is estimated at Rs. 3.23 lakhs.

The operating and financial position of this concern for the year 1957-8 was as under:—

Number of routes operated on 31 March 1958	7
Total route mileage in operation on 31 March 1958	188
Estimated profit	Rs. 2.79 lakhs

Madhya Pradesh—Central Provinces Transport Services, Jubbulpore.—This undertaking has shown a profit of Rs. 15.02 lakhs as against Rs. 13.75 lakhs last year. The Railway's share of investment is Rs. 9.96 lakhs.

Orissa State.—The estimated profit of the Orissa Road Transport Co. Ltd., Berhampur (Ganjam) during the period under review was Rs. 7.03 lakhs as against the net profit of Rs. 4.05 lakhs during 1956-7.

The company declared a dividend of 5 per cent for the year 1956-7, on its paid-up capital. A sum of Rs. 30,000 has been credited to the Railway as dividend on its investment of Rs. 6 lakhs (being 20 per cent of the total paid-up capital).

Punjab State.—During the year under review, the Kulu Valley Transport Private Ltd. owned a fleet of 23 vehicles. The total mileage run was 517,439. The net profit during the year was Rs. 38,520. The Railway's share of investment is Rs. 1.72 lakhs in this company.

The total bus-miles operated during the year by the PEPSU Road Transport Corporation were 6,596,429; the number of passengers carried was 7,996,377; and the return on the utilised capital was 45·13 per cent. The Railway's share of investment is 20 per cent of the total capital invested in this corporation.

80. Closer contact with businessmen.—With a view to associating local public opinion with the day-to-day business of the Railways relating to commercial matters, such as, booking and other facilities for goods, parcels, luggage, and also passenger amenities at the respective stations, Railway Administrations continued to maintain close contact with trade, commerce and industry, through Station Consultative Committees functioning at important stations.

Besides, the National Railway Users' Consultative Council at the Centre and the Zonal and the Regional/Divisional Railway Users' Consultative Committees on the Railways, consisting of the representatives of the various interests and users of the railways, continued to function usefully.

81. Claims for compensation and refunds.—During the year 489,115 claims were settled by Indian Government Railways as against 492,962 during 1956-7. The number of claims which remained outstanding at the close of the year 1957-8 was 44,837 as against 57,096 at the end of the year 1956-7.

There was a decrease of 12,259 in the number of outstanding cases at the end of the year.

The net amount paid by the Railways on account of goods or parcels lost or damaged during the year under review was Rs. 3.27 crores against Rs. 3.33 crores during 1956-7.

The average time taken in the settlement of a claim was 49 days as against 52 days in the previous year.

Incidence of claims.—During the year under review, the number of new claims received and claims re-opened was 476·856 as against 476,244 in 1956-7, an increase of 612 cases or 0.13 per cent.

While the tendency for the number of new claims to increase persisted, the position has been arrested during the year and despite the continuing increase in the traffic carried, the increase in the number of new claims was small as compared to the earlier years.

Incidence of suits arising out of claims for compensation.—The number of suits filed and remaining outstanding at the close of the year were 38,992 and 19,617 respectively as against 36,469 and 17,834 during the year 1956-7.

The statements at pages 50-52 pertaining to the year under review show:

(*a*) the number of claims received in respect of goods or parcel lost, damaged or overcharged and the average time taken for settlement;

(*b*) number and value of claims in respect of goods or parcels lost or damaged under the main causes; and

(c) number of court cases in respect of goods or parcels lost, damaged or delayed and their disposal.

82. Prevention of claims.—The subject of prevention of claims continued to receive sustained attention.

Apart from the vigilance kept on the various aspects of claims prevention measures, Claims Prevention Organizations also started analysing the claims paid both causewise and commoditywise with a view to pinpointing black spots and for adoption of suitable remedial measures.

The movement of particular commodities like piece goods, sugar, grains and pulses, iron and steel and perishable consignments continued to be watched in order to reduce the incidence of claims arising on these consignments.

Co-ordination meetings between Claims Prevention Officers and Railway Security Officers were also arranged periodically at which matters like standardization of ink used for marking packages, wagon label cards and sealing wax used for sealing wagons, examination of packing used for different commodities, and of methods of loading consignments inside wagons, rivetting E. P. Locking were discussed.

Apart from the several measures mentioned above, some of the special steps taken to improve the position are:

(i) introduction from 1 April 1957 of special condition S/29, *viz.*, provision of dunnage in regard to wagon load consignments of grains and pulses to prevent pilferage through door crevices of wagons;

(ii) use of private locks by public in respect of consignments in wagon loads as a measure of extra safety;

(iii) provision of railway armed escorts of goods trains carrying valuable goods through unsafe areas; and

STATEMENT A

Claims received for goods or parcels damaged, lost or overcharged, and the average time for settlement—1957-8

Item No.	Particulars	Central	Eastern	Northern	North Eastern	Southern	South Eastern	Western	Total all Railways
(1)	Number of claims involving compensation for goods or parcels lost, damaged, or delayed, carried over as unsettled at the close of the preceding year	9,619	4,957†	9,536	12,886	4,261	9,092	6,745	57,096†
(2)	Number of claims received (and re-opened) for compensation on account of goods or parcels lost, damaged, or delayed during the current year								
	(a) Total number of new claims received	72,100	64,777	75,865	59,179	44,344	60,042	77,449	453,756
	(b) Total number of cases re-opened	5,396	1,940	3,338	5,103	3,500	522	3,301	23,100
	(c) Total of (a) and (b)	77,496	66,717	79,203	64,282	47,844	60,564	80,750	476,856
(3)	Number of claims referred to against (items 1 and 2) settled during the year								
	(a) Total number of cases settled by payment	41,525	30,334	49,570	28,274	27,274	32,861	46,632	256,470
	(b) Total number of cases settled otherwise	38,019	37,405	32,697	37,672	21,091	31,502	34,259	232,645
	(c) Total of (a) and (b)	79,544	67,739	82,267	65,946	48,365	64,363	80,891	489,115
(4)	Balance outstanding as unsettled at the close of the year	7,571	3,935	6,472	11,222	3,740	5,293	6,604	44,837
(4)(a)	Number of claims pending for more than six months on 31-3-58	255	82	776	1,364	68	382	156	3,083
(5)	Net amount paid in compensation (in rupees)	75,02,540	43,18,173	52,87,895	51,23,151	20,64,053	53,64,839	30,83,526	32,744,177
(6)	Percentage of sum paid in compensation (item 5) to gross earnings	1·54	1·18	1·5	1·56	0·66	1·36	0.75	1·25
(7)	Average time taken in settlement of claims shown against items (1) and (2) (days)	58	47	46	66	42	46	47	49
(8)	Number of applications received for refunds on goods and parcels overcharged	78,290	28,598	27,313	22,098	31,413	9,594	18,466	215,772
(9)	Average time taken in settlement of claims shown against item (8) (days)	58	64	41	47	38	158	227*	72

*The increase in number of days for settlement of refund claims, both coaching and goods, is due to old cases being disposed of in the early months of 1958 after the arrears were traced in December, 1957.
† Revised due to inclusion of coal claims not shown last year.

STATEMENT B

Number and Value of Claims Paid—1957-8

Item No.	Particulars		Central	Eastern	Northern	North Eastern	Southern	South Eastern	Western	Total all Railways
1	2		3	4	5	6	7	8	9	10
(1)	Claims paid on account of goods lost and stolen	No.	25,400	5,308	25,333	12,750	7,982	20,932	31,797	1,29,502
		Value (Rs.)	25,52,592	12,11,074	30,39,650	19,29,151	6,33,117	21,34,838	26,13,441	1,41,13,863
(2)	Claims paid on account of goods damaged by wet	No.	4,935	2,008	913	2,018	3,889	1,626	4,164	19,553
		Value (Rs.)	5,89,555	4,44,909	1,33,453	3,46,992	3,56,795	4,40,929	5,97,455	29,10,088
(3)	Claims paid on account of goods damaged by fire	No.	50	3	31	22	3	9	5	123
		Value (Rs.)	57,833	334	11,348	2,34,028	11,583	5,117	5,017	3,25,260
(4)	Claims paid on account of goods damaged by breakage	No.	704	1,911	547	57	501	656	397	4,773
		Value (Rs.)	59,742	1,01,125	99,144	7,485	21,583	74,202	34,191	3,97,472
(5)	Claims paid on account of parcels and luggage lost and stolen	No.	5,800	†	†	4,274	3,123	8,308	9,439	30,944
		Value (Rs.)	1,28,955	†	†	6,04,933	2,47,694	8,20,063	4,90,588	22,92,233
(6)	Claims paid on account of other causes	No.	4,636	23,774	22,746	9,153	8,818	2,350	830	72,307
		Value (Rs.)	9,00,305	52,68,367	27,31,960	20,00,562	4,05,230	12,54,477*	1,51,135	1,27,12,036
(7)	Total	No.	41,525	33,004	49,570	28,274	24,316	33,881	46,632	2,57,202
		Value (Rs.)	42,88,982	70,25,809	60,15,555	51,23,151	16,76,002	47,29,626	38,91,827	3,27,50,952

* The amount of Rs. 12,54,477 is inclusive of Rs. 8,80,770 debited to E.III/3700 by clearance of 'suspense account' and by accepting debits raised by other Railways. Causewise break-down of the said amount has, however, not been maintained. As such it has been shown under the head 'other causes'.

† Included in item 1.

STATEMENT C

Number of Court Cases in respect of Claims and their Disposal—1957-8.

Item No.	Particulars	Central	Eastern	Northern	North Eastern	Southern	South Eastern	Western	Total all Railways
(1)	Number of suits filed in court (or pending from the previous year) for the/recovery of compensation in respect of goods or parcels lost, damaged or delayed	3,499	5,287	4,657	12,146	1,161	7,572	4,670	38,992
(2)	Number of suits settled out of court	766	2,243	860	2,884	235	2,023	884	9,895
(3)	Number of suits dismissed	208	687	1,024*	518	158	503	565	3,663
(4)	Number of suits decreed	280	427	515	2,259	88	1,743	505	5,817
(5)	Number of suits pending	2,245	1,930	2,258	6,485	680	3,303	2,716	19,617

*This includes 665 suits withdrawn.

(iv) the publication by the Railway Board of a pamphlet in English containing principal rules and procedure for the preferment and disposal of claims for compensation, refunds, etc., for the guidance and information of the public.

83. Ticketless travel.—Concentrated drives to eradicate ticketless travel on the various Railways continued to be carried out as in the preceding year both by the normal ticket checking arrangements and by specially selected squads of ticket checking staff with the assistance of the Railway Magistrates functioning in several States.

The following were some of the special steps taken for intensifying the efforts against ticketless travel:

(i) Flying Squads were used for surprise and special checks.

(ii) Special Magistrates were appointed for summarily trying cases under the Indian Railways Act, especially in areas where ticketless travel was very high.

(iii) Travelling Ticket Examiners in plain clothes were posted on certain sections to detect habitual ticketless travellers who evaded checking staff in uniforms.

(iv) One Travelling Ticket Examiner for every two coaches was provided on certain important long distance trains throughout the run of the trains.

(v) In order to ensure that no difficulty was experienced by passengers in purchasing tickets from booking windows, routine and surprise inspections were made by Inspectors and Officers, to see that booking arrangements were satisfactory in all respects.

The Central Ticket Checking Organization which was set up in January 1957, to assess the extent of ticketless travel, prevalent on different Railways, and the loss in revenue caused to the Railways thereby, completed its work in August 1957.

It was revealed from the checks that the percentage of ticketless travel over the Railways was about 4 per cent and the consequent loss in revenue was of the order of Rs. 4.5 crores.

Detailed statements, showing the results of the checks by sections on the various Railways were also prepared and sent to the Railways for suitable intensification of their drives.

The report on the results of the working of this organization was under examination of the Railway Board.

The following figures give a comparative picture of the checks made by the Ticket Checking Organization on the Railways during the years 1956-7 and 1957-8:

	1956-7	1957-8
No. of passengers detected without tickets	7,353,340	6,279,507
Amount of fare and excess charges realised	Rs. 1,58,02,951	Rs. 1,42,90,595

84. Mela traffic.—Adequate arrangements were made to deal with additional traffic due to melas and fairs held during the year. The composition of the daily train services was strengthened and special trains were run within the available resources. Extra booking offices and windows were opened at the stations concerned and adequate arrangements for supply of drinking water, sanitation, lighting, etc., were made.

Some of the important melas held during the year and the arrangements made were:

Central Railway—

Hindola and Janamashtmi fair at Mathura.—This fair was held from 12 July 1957 to 20 August 1957, the principal days being 6 to 8, 10 and 18 August 1957. 154,737 inward and 206,928 outward passengers were cleared during this period in daily train services.

Eastern Railway—

Pitripaksha fair at Gaya.—This fair was held from 9 to 23 September 1957. 34,036 inward and 65,325 outward passengers were dealt with. The load of passenger trains on Kiul-Gaya Section was augmented as required.

Northern Railway—

Kartik Mela.—This mela was held from 2 to 10 November 1957 at Garhmuktesar, Kankhather, Hardwar, Balawali, Rajghat and Madhoganj stations, the principal bathing day being 7 November 1957. A total number of 205,220 inward and 165,199 outward passengers were dealt with. 110 special trains were run. The bulk of the traffic was dealt with at Garhmuktesar and Kankhather stations.

Phalgu fair at Pharel.—This fair was held on 23 September 1957 at Pharel served by Pehowa Road and Tik Railway stations. 165,784 passengers were dealt with. In order to increase the section capacity, Tik, Sajuma and Pindarsi stations were converted into crossing stations. During the period, 77 special trains were run.

North Eastern Railway—

Sonepore Mela.—This *mela* was held from 4 to 17 November 1957 at Sonepore, the principal day being 7 November 1957.

In addition to 249,810 outward passengers dealt with, 49 wagons of livestock were received and 122 wagons were despatched.

Eight additional Third class and 2 Upper class booking windows and two Enquiry offices were set up at Sonepore station. One Third class booking office and one Enquiry office were opened in the *mela* ground.

33 special trains were run during the period.

Southern Railway—

Kistna Pushkaram Festival at Bezwada.—The Kistna Pushkaram Festival which falls once in twelve years took place in June 1957.

South Eastern Railway.—Principal festival held over this Railway were Dol Jatra and Ratha Jatra at Puri, Bhubaneswar and Sakhigopal. Necessary arrangements were made to deal with the large volume of passenger traffic by strengthening the trains and by running additional trains.

Western Railway.—Important fairs, were Khwaja Urs and Pushkar fairs at Ajmer and Sinhastha fair at Ujjain. The existing accommodation on trains was strengthened and additional trains were run to relieve overcrowding in trains during the periods of these fairs.

85. Measures to ensure civility and assistance on the part of the Railway staff in their dealings with the public.—Railway Administrations continued to pay special attention to this matter. The duty of the Railway staff as public servants was impressed on all categories of staff coming into contact with the public, through the media of railway gazettes and suitable posters.

Further, special lectures on 'Courtesy and Civility to the public' have been arranged for the new entrants passing through Railway Training Schools.

Prompt cognizance continued to be taken of all complaints under this head and suitable action taken against the railway staff in all proved cases of discourteous conduct.

86. Measures taken to foster tourist traffic.—Steps continued to be taken to foster tourist traffic, both overseas and inland, during the year.

In addition to the facilities already available for tourist traffic, the following additional measures were taken during the year to foster tourist traffic.

Retiring Rooms.—For the convenience of the tourists, new retiring rooms were constructed at the following stations—

Kurnool Town

Bombay V. T.

Salem
Mettupalaiyam
Jubbulpore
Jaipur
Podanur
Sholapur
Erode
Coimbatore

The works pertaining to provision of retiring rooms at Agra Fort and Dwarka stations were also in progress during the year under review.

Concession tickets.—Concessional rail-cum-road and rail-cum-air return tickets to Srinagar and concessional return tickets to other hill stations were issued. Concessional return tickets were also introduced during Dussehra, Diwali and Christmas holidays.

Travel agents.—During the year under review, three new branch offices of tourists agencies were recognised, *viz.*, the Hyderabad Branch of Messrs. Trade Wings (Private) Ltd., Bombay, Messrs. Saha and Rai Travels Ltd., Sujan Singh Park, Hotel Ambassador, New Delhi and Messrs. Harrisons and Crossfield Ltd., Cochin (Malabar, South India).

Tourist literature.—Railway bookstalls properly displayed and kept for sale an adequate stock of tourist literature.

CHAPTER IV

NEW CONSTRUCTION AND ENGINEERING WORKS

87. New lines opened during 1957-8.—The following lines representing an addition of 168.14 miles were opened during the year :

LINES OPENED DURING 1957-8

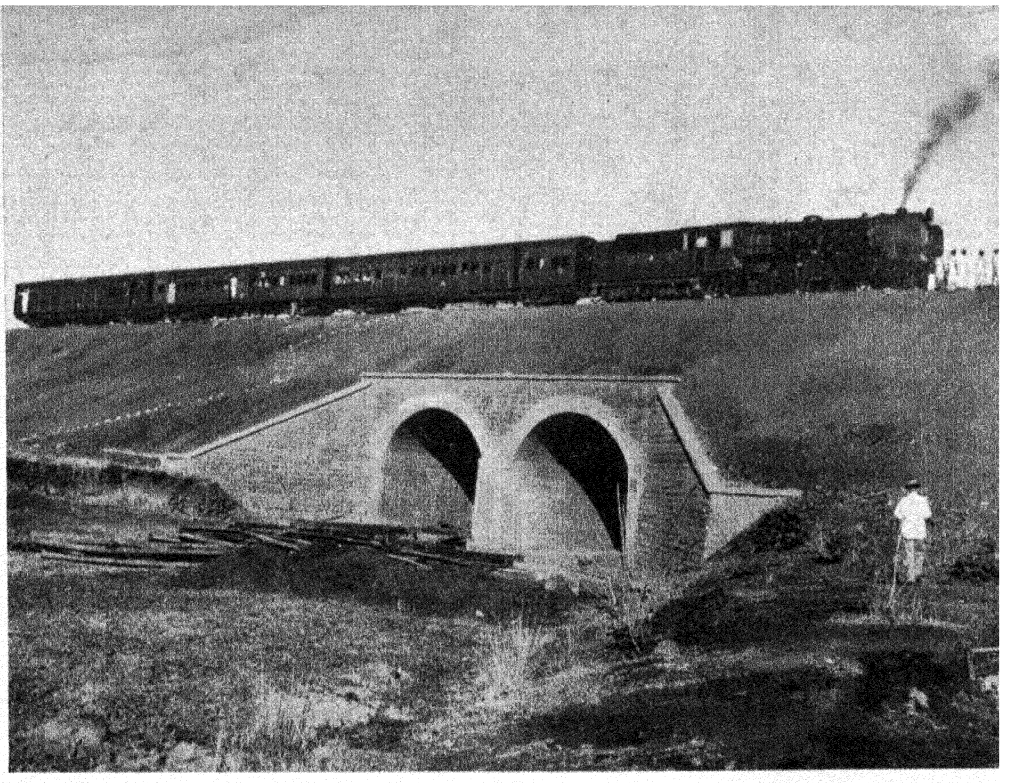
Railway	*New lines*	*Gauge*	*Mileage*
Central	Khandwa-Takal (Section of Khandwa-Hingoli Railway construction)	M. G.	18·78
	Hingoli-Kanhergaon (Section of Khandwa-Hingoli Railway construction)	M. G.	17·69
Northern	Barhan-Awagarh (Part of Barhan-Etah rail link)	B. G.	23·33
North-Eastern	Ledo-Lekhapani Section	M. G.	5·41
Southern	Quilon-Kottayam (Sections I and II of Quilon-Ernakulam Railway)	M. G.	59·32
Western	Raniwara-Bhildi (Opened for goods traffic)	M. G.	43·61
		Total.	168·14

The construction of Quilon-Ernakulam line, over a length of about 96·55 miles on the Metre gauge system of the Southern Railway will promote trade and industries in the area. This will also meet the long felt need for such an arterial link for the movement of oil, food-stuffs and other commodities. The picturesque scenery of evergreen country side will also attract tourist traffic. The line between kottayam and Ernakulam (37·23 miles) was opened to traffic on 17 October 1956 and the remaining portion between Quilon and Kottayam (59·32 miles) was opened to traffic on 6 January 1958.

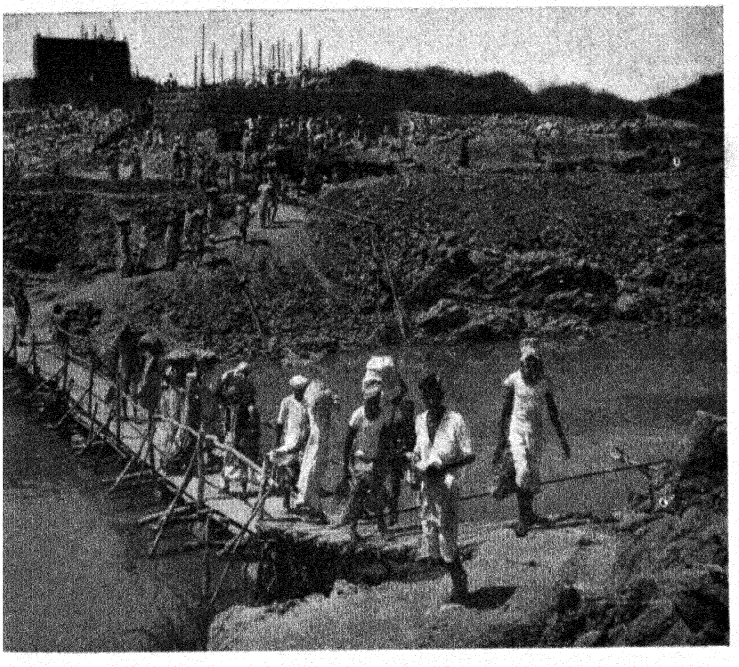
The construction of Raniwara-Bhildi Metre gauge line from Bhildi to Raniwara will provide an alternative main line connection between Kandla and Delhi and other important points on the Metre gauge system and also a shorter connection from Kandla Port to a large portion of its hinderland in Rajasthan and Punjab. The line has since been opened to passenger traffic on and from 22 April 1958.

88. Lines under construction during 1957-8.—The under-mentioned lines, totalling 554·67 miles were under construction during the year :

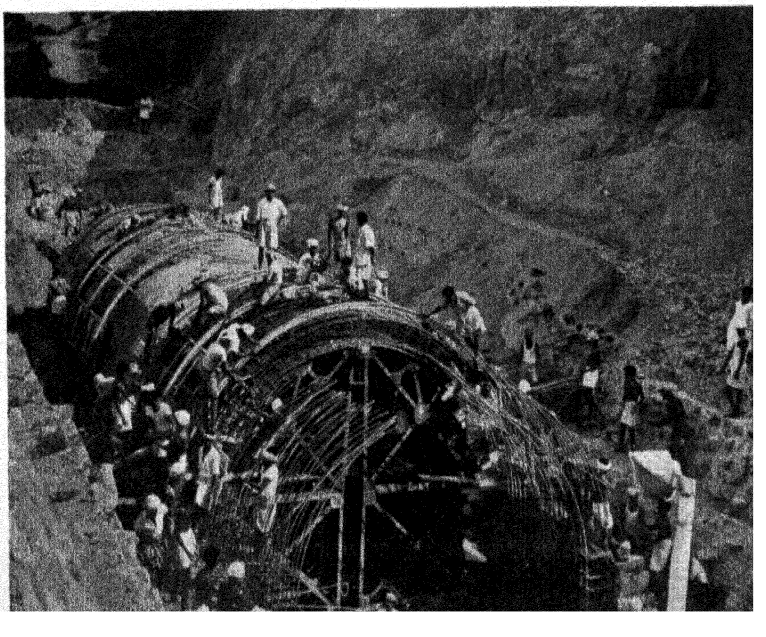
Railway	*New lines*	*Mileage*
Central	Khandwa-Hingoli	150·76
Eastern	Chandrapura-Muri-Ranchi-Bondamunda (Stages I and II Chandrapura-Muri-Ranchi)	84·71
	Baraset-Basirhat-Hasnabad	32·73
	Branch line from Jarangdih to Kathara (Stage I)	3·00
	Patratu-Damodar extension	3·03
	Branch line to serve Saunda 'B' Block	1·44
	Damodar-Kalipahari Avoiding line	8·70
Northern	Etah-Barhan	12·94
South Eastern	Noamandi-Banspani	17·90
	Rourkela (Bondamunda)-Dumaro	42·00
	Bhilai-Dhalli-Rajhera	53·00
	Bijuri-Karonji	56·86
	Bhilai-Deorjhal siding	12·50
	Barabil-Pamposh Gorge siding	5·80
Western	Indore-Devas-Ujjain	49·23
	Restoration of dismantled lines	
Northern	Rohtak-Gohana (Portion of Rohtak Gohana-Panipat dismantled line)	20·07



BAGH NULLAH ON KHANDWA-HINGOLI SECTION—CENTRAL RAILWAY



MEN AT WORK ON THE DAMODAR BRIDGE—EASTERN RAILWAY



TUNNEL CONSTRUCTION NEAR KOTTAYAM FOR THE QUILON ERNAKULAM RAILWAY—SOUTHERN RAILWAY

89. Lines closed during 1957-8.—Nil.

90. New surveys during 1957-8.—Surveys for the under mentioned projects were sanctioned during the year as per details given below:

Railway	*Projects*	*Gauge*	*Approximate Mileage*
(1) Northern	Ghaziabad-Tughalkabad *via* Second Yamuna Bridge (Final location survey).	Broad	16·08
(2) North-Eastern	(i) Alternative railway line from near about Domohani-Alipurduar (Preliminary Engineering survey).	Metre	..
	(ii) Kumedpur-Barsoi (Preliminary Engineering survey)	Metre	17·00
(3) South-Eastern	Sambalpur-Titilagarh (Final location survey)	Broad	111·00

91. Open line works.—

Remodelling of Yards—

Central Railway—

(i) *Kazipet Yard.*—In order to cope with the anticipated requirement for handling of 1,000 wagons by 1960-1 as against the existing yard capacity of 550 wagons, it has been decided to remodel this yard at an estimated cost of Rs. 21.65 lakhs. The work is in progress.

(ii) *Katni—Provision of a new yard.*—By 1960-1 it is expected that the volume of traffic will go up from 350 wagons to 750 wagons each way mainly on account of the increased coal output from the Central India Coalfields and Vindhya Pradesh Collieries. As expansion of the present yard at the existing site is not feasible due to the unsuitable terrain, it has been decided to provide a new yard—2 miles away from the present location near the new Katni Station at an estimated cost of Rs. 89.85 lakhs. The work is in progress.

(iii) *Wadi Yard.*—Due to inadequate water resources at Wadi, there are two goods terminals at Wadi and Shahabad within a short distance and wagons for Shahabad and beyond from Secunderabad side suffer detention both at Wadi and Shahabad. Similarly, wagons from Sholapur for Secunderabad suffer detention both at Shahabad and Wadi. These delays could be eliminated if there is one terminal instead of two. Accordingly, all terminal facilities are being concentrated in one yard at Wadi which will be the terminal station. Adequate water supply is also being provided at Wadi. An estimate amounting to Rs. 32.51 lakhs for this work has been sanctioned and the work is in progress.

(iv) *Bhusaval Up Yard.*—This yard will be required to handle about 34 goods trains by the end of 1960-1 against 22 at present. In order to eliminate the existing handicaps in the yard and to cope with the anticipated increase in traffic during the Second Five Year Plan period, it has been decided to remodel this yard and an estimate amounting to Rs. 51 lakhs for this purpose has been sanctioned. The work is in progress.

Western Railway—

(i) *Phulera Yard.*—This yard will be required to deal with increased traffic in oil and imported goods from Kandla Port and increased movement of gypsum and iron ore and other traffic developing in Rajasthan. It is estimated that the yard will be required to handle 53 trains per day against about 30 trains at present. In order to handle this increased traffic, it has been decided to remodel this yard at an estimated cost of Rs. 57.81 lakhs. The work is in progress.

(ii) *Jaipur Yard.*—The existing facilities in the yard are inadequate and in order to handle the present traffic efficiently and to meet the anticipated increase in traffic by the end of the Second Five Year Plan, it has been decided to remodel this yard at an estimated cost of Rs. 55.77 lakhs. The work is in progress.

(iii) *Sawai Madhopur Yard.*—The present transhipment capacity of this yard is about 75 Broad gauge wagons per day. With the increase in traffic, particularly of coal, gypsum and general goods, it has been considered necessary to increase the capacity from 75 to 100 Broad and 150 Metre gauge wagons per day. An estimate amounting to Rs. 23.99 lakhs has, therefore, been sanctioned for remodelling of this yard. This work is in progress.

(iv) *Palanpur Yard*: The existing facilities in the yard are inadequate to deal with the anticipated increase in traffic due to the development of the Kandla Port and it has been decided to remodel the yard. An estimate amounting to Rs. 41.05 lakhs has been sanctioned for this work which is in progress.

Eastern Railway.—

(i) *Howrah—Provision of additional coaching, stabling and washing lines.*—The present stabling accommodation in Howrah coaching yard is for 360 bogies including certain platforms where rakes are stabled at night. This accommodation, with increased frequency of trains as now envisaged will not be adequate. Even at present about 40 coaches of the Eastern Railway have to be stabled outside Howrah for want of stabling accommodation. The existing stabling yard is being shifted to a new site in the Tikiapara triangle where accommodation equivalent to the existing yard will be provided, but provision for additional stock required for dealing with the increased traffic during the Second Five Year Plan will still be necessary. It has, therefore, been decided to provide additional coaching, stabling and washing lines in the yard to improve operation and to cater for the anticipated increase in traffic. An estimate amounting to Rs. 40.42 lakhs has been sanctioned for this purpose and the work is in progress.

(ii) *Mughalsarai—Additions and alterations to yard (Phase I).*—The present capacity of the yard is inadequate even to deal with the present level of traffic expeditiously. This yard was originally designed for moving about 1,400 wagons each way. Traffic has progressively increased and this yard will be required to handle 3,000 wagons per day by the end of the Second Plan period. In order to handle this target, remodelling of the yard has been planned to be carried out in two phases. The first phase of the remodelling is estimated to cost Rs. 115 lakhs and has been included in the Works Programme for 1957-8 and some of the important items of work have been taken in hand.

South Eastern Railway—

Adityapur and Tatanagar—Additions and alterations to yard.—In order to cope with the anticipated increase in traffic as a result of the expansion programme of Messrs. Tata Iron & Steel Company from their present capacity of three quarter million tons to two million tons of steel ingots per year during the Second Five Year Plan, it is necessary to provide additional facilities in the yards at Adityapur and Tatanagar to deal with this increase in traffic. An estimate amounting to Rs. 222.60 lakhs for this work has been sanctioned and the work is in progress.

Northern Railway—

Delhi Main Yard.—It has been decided to remodel the Main Station yard to deal with the present traffic efficiently and also to cater for the anticipated increase in traffic at an estimated cost of Rs. 38·50 lakhs. The work is in progress.

Extension of Loops—

Western Railway—

Shamgarh-Gangapur Section.—The lengths of loops on section adjoining Shamgarh-Gangapur Section have been increased to the standard length to pass 70 wagon trains. Therefore, the lengths of loops at stations on this section also have to be brought to the standard length to derive full advantage of the scheme with a view to cope with the additional traffic on this section. Accordingly, an estimate amouning to Rs. 22.45 lakhs for this work has been sanctioned and the work is in progress.

Eastern Railway—

Sahibganj-Kiul Section.—An estimate amounting to Rs. 25.32 lakhs has been sanctioned for extending the length of loops between Sahibganj-Kiul Section, as this section is working to saturation point and it is very necessary that the load of trains should be increased from 55 to 70 wagons. The work is in progress.

Doubling/Conversion of lines.—To relieve the existing traffic congestion and to deal with the increased traffic anticipated at the end of Second Five Year Plan as well as to deal with the traffic arising out of other developmental works, such as the steel plants, coal production, etc., the following major doublings were sanctioned during 1957-8:

Railway	*Name of work*	*Mileage*	*Gauge*	*Estimated cost (in lakhs of rupees)*
Central . .	Partial doubling of Bina-Bhopal Section	39	B. G.	3,00
Northern . .	Doubling between Moradabad and Khanalampur (Second Phase) Khanalampur-Lakhsar excluding Chodiala-Baliakheri	25	B. G.	1,48
North-Eastern .	Katihar-Barsoi	24	M. G.	87
	Khagaria-Katareah	48	M. G.	1,88
Western . .	Baroda-Anand	19	B. G.	99
	Partial doubling of Ratlam-Nagda Section	12	B. G.	76

No conversion of lines was sanctioned during the year.

92. Overbridges and underbridges constructed in replacement of level crossings.—During the year under review, work on a number of road overbridges and underbridges was completed, while in a few cases the work was in progress. The detailed position of the works undertaken by the Railway Administrations is given below:

Central Railway—

The work of providing a road overbridge in replacement of the existing level crossing at Akola was completed during the year. The work on the road overbridge at Shivajinagar was also nearing completion.

The work of providing seven road overbridges on the Delhi-Mathura Section and one road overbridge at Lallaguda on Secunderabad Division was in progress.

Northern Railway—

The work of providing a road overbridge in replacement of the level crossing between Jangpura and Safdarjang Siding was completed.

North Eastern Railway—

The following road overbridges were constructed :

(1) Road overbridge near Siliguri Railway Station on National Highway No. 31 between mile 0 and mile 1 between Siliguri Jn. and Gulma Stations ;

(2) Road overbridge on National Highway No. 2 between Mathura Jn. and Bhainsa Stations at mile 213/12-13 and

(3) Road overbridge at Palasbari in replacement of a level crossing at Pandu.

Southern Railway—

The work of providing overbridge in lieu of the existing level crossings at the following places was in progress:

(1) Road overbridge in lieu of the existing level crossing at Mc.Nicholl's Road on the Madras Electric Suburban section near Chetpat Station ;

(2) Road overbridge at miles 20/6-7 in lieu of Kokkalai level crossing near Trichur on the Shoranur-Cochin Harbour section ;

(3) Road overbridge in lieu of the existing level crossing at mile 493/11-12 near Guntur on Guntur-Guntakal section and

(4) Road overbridge at mile 83/15-16 near Kadur in lieu of the existing level crossing at mile 82/2-3 on the Arsikere-Harihar section.

Preliminary work in connection with the provision of a road overbridge in lieu of the existing level crossing at mile 27/13-14 and 28/1-2 near Bhadravati was also undertaken during the year under review.

Western Railway—

The work of providing two road overbridges and one road underbridge between Ahmedabad and Sabarmati was taken in hand.

93. Important works.—

Ganga Bridge Project.—The work on the balance seven main piers undertaken in November 1956 and reported as in an advance stage of construction by the end of 1956-7 was completed during this period in all respects, including the placement of grillages to receive the main spans.

With the receipt of steel for the manufacture of complete spans, the fabrication of the main girder on the superstructure was commenced in May-June 1957 and it was possible to commence erection of the girders from 1 October 1957. The first span which was erected partly on false work and partly by cantilever was completed in December 1957. The second span which was erected entirely as cantilever was completed in February 1958. It is for the first time that such a long span of 397 ft. centres of bearings with both a Railway deck and a Road deck, is being erected by this method. The erection of the third span also was completed by March 1958.

The earth moving plants worked on the southern approaches to the bridge and carried out 84 million cft. of earthwork, making an up-to-date total of 199.3 million cft.

Work on the minor bridges on the southern approach which were in progress last year was completed during this year.

Work on the construction of transhipment yard, Broad gauge/Metre gauge, marshalling and sorting yards both B.G. and M.G. on the north bank with its colony and ancillaries was also progressed further.

The overall physical progress up to 31 March 1958 was 65 per cent.

Brahmaputra Bridge.—With a view to undertaking the construction of a double line metre gauge bridge with a two lane roadway on top and two cantilevered foot-paths between Amingaon and Pandu on the river Brahmaputra costing approximately Rs. 10 crores ; an urgency certificate for Rs. 22 lakhs to make the preliminary arrangements was sanctioned.

Survey for its location was in progress. Preliminary works, *i.e.*, clearing the site of the Bridge, construction of new station building, laying of store yard and staff quarters and filling of low land on both ends were taken in hand.

The length of the bridge will be 4,200 ft. consisting of 10 spans of 400 ft. each and 2 *land* spans of 100 ft. each on buried piers at each approach.

94. Bridge strengthening and protection programme.—The important items relating to bridges which were strengthened during the year 1957-8 or on which such work was in progress at the close of the year are given below:

South Eastern Railway—

(a) *Strengthening of bridges.*—Bridge No. 57 (Rupnarain) at mile 33.85 on the Howrah-Khargpur Section was strengthened.

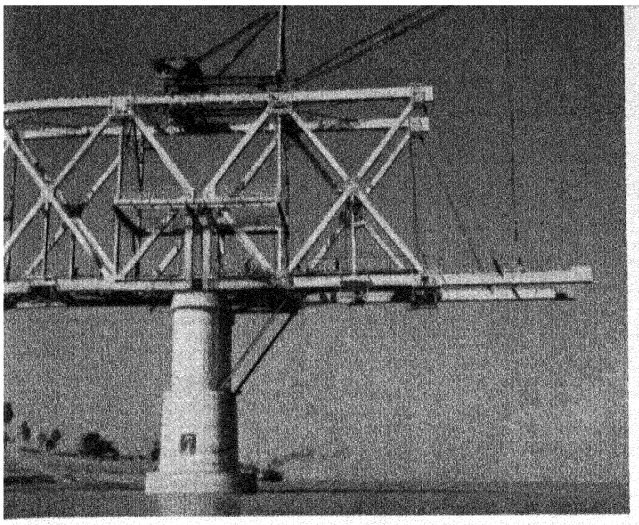
Strengthening the rail bearers and providing top lateral bracings of 5 × 200′ deck spans of bridge No. 46 (Hasdeo) at mile 415.297 in Chakardharpur-Bilaspur Section, was taken in hand.

(b) *Replacement.*—Weak and corroded girders of bridge No. 26 on Jharsaguda-Sambalpur and No. 6 on Howrah-Khargpur Sections were replaced.

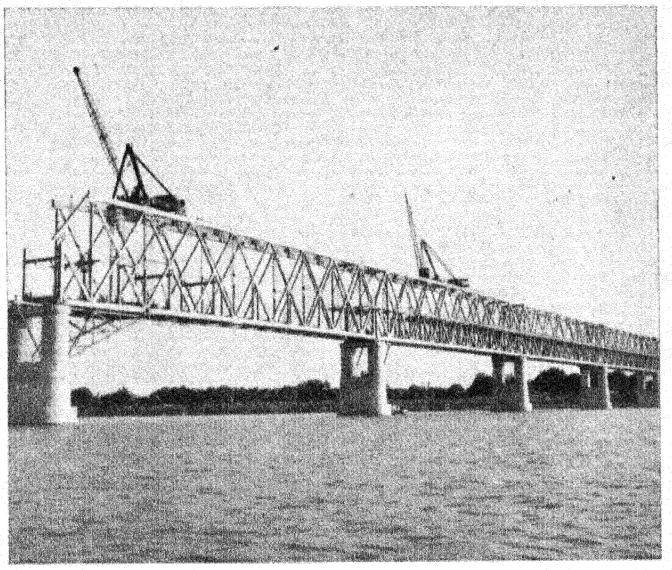
(c) *Protection Works.*—Guard rails have been provided on 125 bridges during 1957-8.

Flooring with drop walls and down stream apron pitching was carried out towards protection of about 70 bridges with shallow foundations.

Boulder pitching was done around the piers of 118 major bridges as a protective measure against deep scours.



CANTILEVER ERECTION OF GANGA BRIDGE GIRDERS



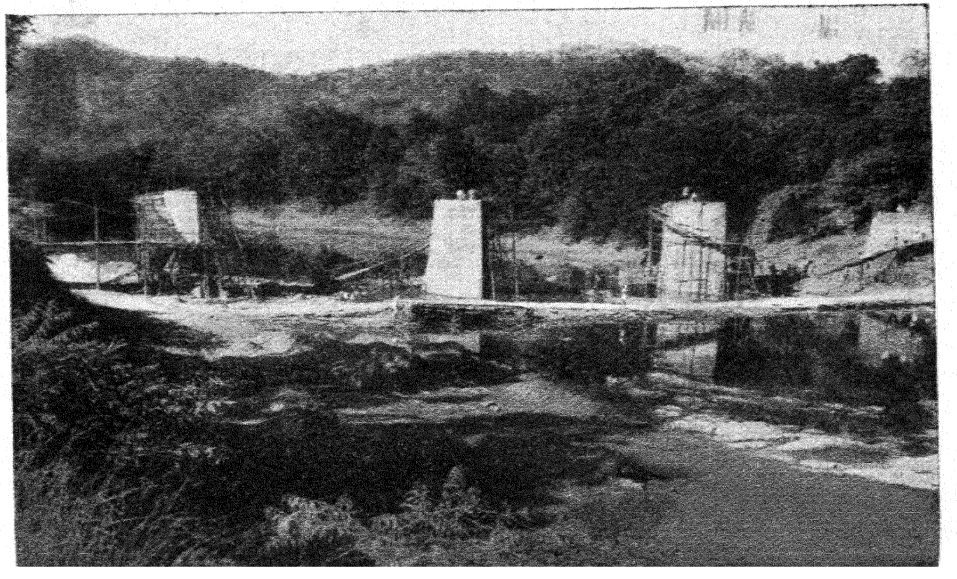
LAUNCHING OF GANGA BRIDGE GIRDERS IN PROGRESS

A VIEW OF COMPLETED PIERS FOR THE GANGA BRIDGE





A PANORAMIC VIEW OF THE GANDAK BRIDGE UNDER CONSTRUCTION BETWEEN SONEPORE AND HAJIPUR STATIONS—NORTH EASTERN RAILWAY



CONSTRUCTION OF A BRIDGE SPANNING THE RIVER KURADI ON THE BONDAMUNDA-DUMARO NEW LINE—SOUTH EASTERN RAILWAY

Eastern Railway—

Strengthening of bridges.—18 bridges were strengthened, one in Sealdah Division, five each in Howrah and Asansol Divisions and seven in Dinapore Division.

North Eastern Railway—

(a) *Strengthening of bridges.*—Desai Bridge at mile 488/21-22; Bridge Nos. 2/K, 12/K, 10/K and 8/K on Barsoi Junction and Kishanganj Section; Turtipar Bridge No. 100 on Bhatni-Allahabad Section and bridge No. 21 between Kawapur and Balrampur on Gorakhpur-Gonda Loop was strengthened. Kirchi Bridge No. 18 (13 × 40′ span) was extended by providing 3 × 40′, 1 × 30′ and 1 × 20′ spans on wooden piles on Dharbhanga-Narkatiaganj Section.

(b) *Replacement.*—Bridge No. 158 at mile 71/13-14 between Mujnai and Madarihat, Neora bridge No. 70 and 13 out of 16 pile bridges on Rangia Junction and Rangapara North Section ; Bridge No. 62 (1 × 20′ G) between Chureb and Munderwa stations on Gorakhpur-Gonda Trunk line ; Bridge No. 47 at miles 30/7-8 between Kichha and Gokulnagar stations on Bhojeepura-Kathgodam main line Section ; Bridge No. 8 between Bhojeepura and Atamanda ; 19 bridges between Deorania and Kichha Road ; 78 bridges between Kichha and Baheri; Bridge No. 157 between Motihari and Mehsi; Bridge No. 202 between Matihari and Semra ; Bridge No. 8 between Muktapur and Kishanpur ; Rapti bridge No. 41 between Jagatbela and Sabjanwa stations on Gorakhpur-Gonda Trunk line; Extension of bridge No. 316 (Raidak II) ; Davang and Digaru spill bridges; Bridges Nos. 179 (AIE), 208 (Dhumurkijan), 219 (Tihu), 227 (Barodia), 223 (Pagladia) and 239 (Nona) were either rebuilt or replaced.

Works relating to rebuilding and replacements, etc., were also in progress on 29 bridges on different sections in addition to works on the Gandak bridge between Hajipur and Sonepur.

(c) *Protection works.*—Protection of land at Kopali river at mile 323/16 to 323/22 between Laopani and Chaparmukh Junction stations ; protection works of approach banks of bridge No. 135 between Kuretha and Labha stations. Pilot channel for diverting the river Kankar near Labha station ; and a spur and earthen bund on left bank of Beki river were undertaken and works on them carried out.

About 14 protection works were in progress on bridges Nos. 123 between Mal and Chalsa, No. 28 between Gulma and Siliguri Junction, No. 35 between Gulma and Sevoke, bridge No. 95 (Chel), No. 91 (Gish), No. 21 (Gomti), No. 3 (Beso), No. 14 between Rajatalab and Nigatpur, Sarda and Elgin bridges, and works for providing guide bunds on Neora, Chel, Rapti, Ghogra and Gaula rivers, etc.

Southern Railway—

Replacement.—Reconstruction of 47 bridges was completed during the year 1957-8.

The works relating to renewal of corroded girders in 48 spans of 40′ girder bridge No. 346 (Pamban viaduct) and provision of R.J.S. Sleepers in place of corroded steel troughing on bridge No. 1201 on Olavakot Division were in progress.

Replacement works on 47 bridges were also in progress.

Central Railway—

(a) *Strengthening of bridges.*—Construction of 3 × 20′ skew bridge at miles 66/15-16 on Secunderabad-Dronachellam Section was completed. The works relating to strengthening piers carrying 100 ft. spans with cement concrete jacket 2 ft. thick at Ken bridge at mile 818/2 on the Jhansi-Manikpur Section were taken in hand.

Desilting of spans of Gambhir bridge on Bayana-Agra Section ; providing south abutment groyne at Narbada bridge ; Culvert No. 424 (1 × 6′) on Bombay-Baroda Section and rebuilding culvert No. 63 (1 × 3′) on Nagda-Mathura Section were undertaken ; arch of culvert No. 499 on Bombay-Baroda

Section was strengthened ; and existing girders of bridge No. 129 between Bordi and Anas on Baroda-Ratlam Section were replaced. Girder Bridge No. 11 at mile 5/2 between Ajmer and Hatundi raised ; weak girders of bridge Nos. 4, 12 and Surkha bridge between Songad and Sihor and weak girders about 85 × 12′ spans on ex-Bhavnagar District were replaced.

Arches of Moda bridge (11 × 30′) between Aliabada and Jamnagar were strengthened.

Approaches to Banas river between Abu Road and Kiwarli raised and a relieving bund provided to prevent damage. Culvert No. 78 on Aukleshwar-Rajpardi Section, Nos. 62 and 68 on Vishamitri-Jambusar Section and No. 24 on Broach-Jambusar Section were rebuilt.

Works relating to rebuilding of culverts Nos. 25 and 38 on Tapti Valley Section, replacing 107 spans of 60′, 30 spans of 10′, 191 spans of 30′ and 168 spans of 20′ by I.R.S. standard girders on Bombay Sub-division, rebuilding of culvert Nos. 10 and 12 on Miyagam-Malsar Section, 95 on Viramgam-Surendranagar Section, 59 on Bayana-Agra Section, 591 on Ajmer-Khandwa Section, were in progress.

(b) *Replacement.*—Replacement of bed stones by R.C.C. bed blocks at Bridge No. 160 on Jaipur Division, strengthening of bridge No. 12 and 26 on Gandhidham-Bhuj Section and recushioning of bridge No. 390 between Parkhan and Achnera and replacement of weak girders at culvert No. 22 and 28 on Bhavnagar Division were taken in hand.

Northern Railway—

(a) *Strengthening of bridges.*—Trough plate in place of bridge Nos. 238 at mile 106/2-3 and 210 near Tapri right guide bund on Hindon river on Saharanpur-Ludhiana Section were provided.

Culverts Nos. 1, 5, 8, 10, 12, 13, 16, 17, 18 and 20 on C.O.D., Kanpur were widened.

The following bridges were also provided:

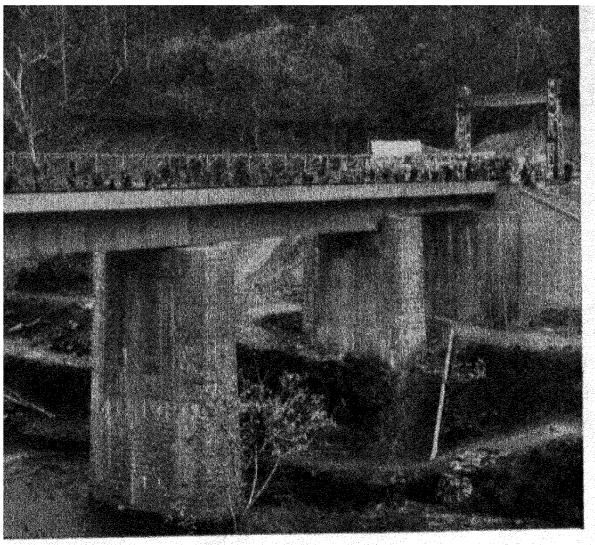
Bridges Nos. 612 and 923 on Pathankot-Jogindernagar Section, Bridges No. 107-B and 107-C at miles 63/16-17 and 63/18-64/1 on Ludhiana-Ferozepore Cantt., No. 44 at mile 15/11-12 on Verka-Derababa Nanak Section were built.

Bridge No. 121 on Lhaksar-Dehra Dun Section was extended by 3 spans.

The works relating to rebuilding and replacement of bed timbers with R.C. bed blocks, rail girders with cracked masonry, arch bridge with Hume pipes, etc. and other protection and training works were in progress on bridge No. 499 on Ghaziabad-Kanpur Section, bridge No. 109 at mile 32/20-21, bridge No. 149 at mile 46/16-17, bridge at mile 57/20-23, bridge No. 79 at mile 21/17-18 on Delhi-Saharanpur Section, bridge No. 6 at mile 0.56 on Kalka Sub-Division, bridges Nos. 5, 22, 43, 46, 56 at miles 0/12, 1/1, 2/12, 5/8-9, 6/4-5, 7/2-3, 9/11-12 on Batala-Qadian Section, bridge No. 68 on Lhaksar-Dehra Dun Section, bridge No. 57-A at mile 217/6-7, 57-B at mile 217/4-6 on Ferozepore Cantt.-Bhatinda Section, bridge No. 341 at mile 144/14 on Faizabad-Lucknow Section, bridge No. 69 at mile 77/14-15 on Raikabagh-Pokaram branch, bridge Nos. 7, 9 and 37 on Samdari-Raniwara branch, bridge No. 116 on Moradabad-Delhi branch, bridge No. 45 at mile 40/11 on Gajraula-Najibabad branch, bridge No. 1274 at mile 498/15-16 on Moradabad-Saharanpur Section and bridge No. 27 on Piper Road-Bilara Section.

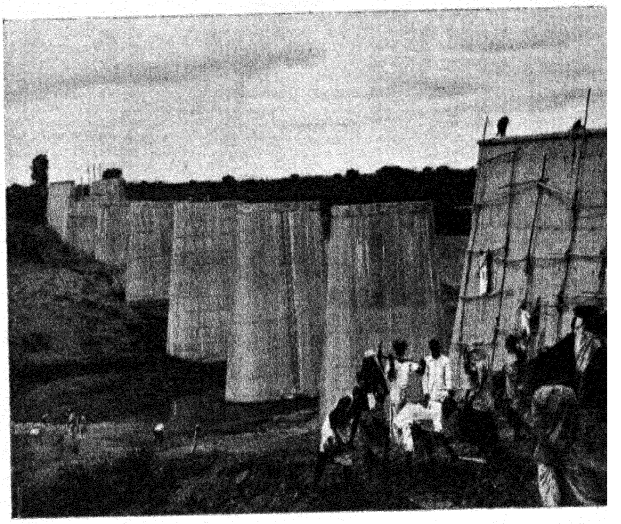
Provision of remedial measures to prevent recurrence of breaches on Jullundur City-Mukerian Section was also in progress.

(b) *Replacement.*—Replacing of bridge timbers by trough sleepers on bridge No. 169 at mile 816/13-14 on Shikohabad-Farukhabad, bed timbers by R.C. bed blocks in bridge No. 87-A at mile 773/6-7 between Harangue and Tundla, Arch bridge No. 186 at mile 64/20-21, No. 141 at mile 43/7-8, Arch Asyphon bridge No. 106 at mile 32/7, girder bridge No. 82 at mile 22/22-23 and Bridge No. 118 at mile 36/15-16, stone slab bridge No. 75 at mile 20/15-16,

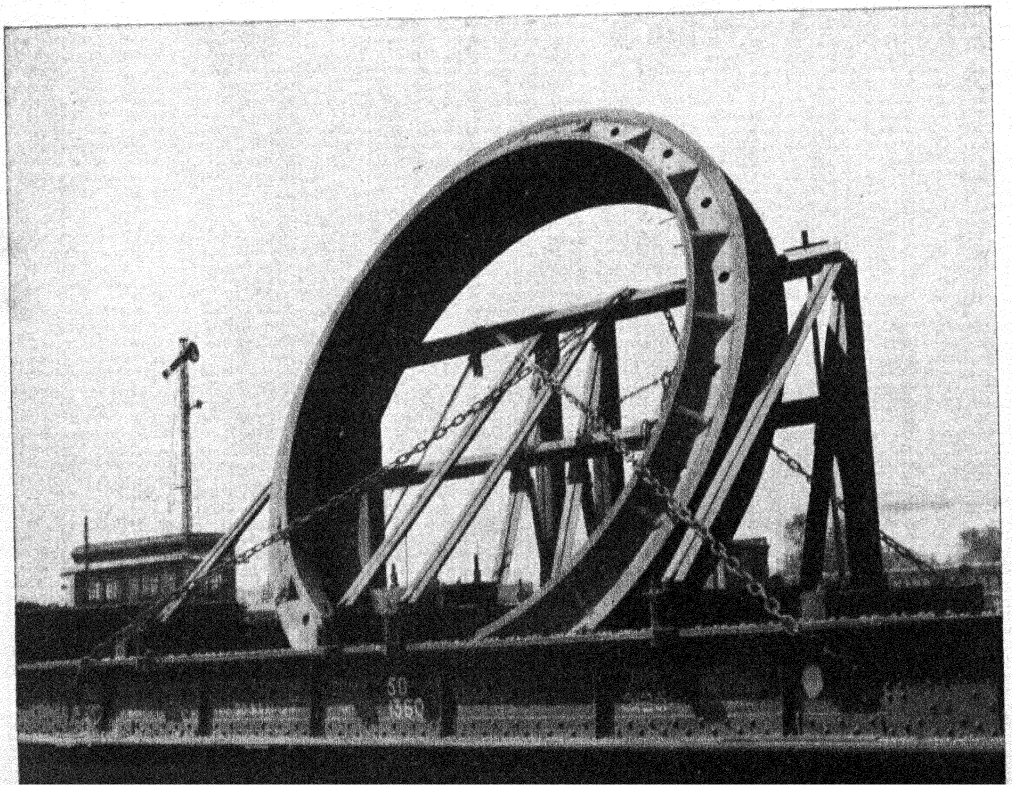


THE KUNDRA NULLAH BRIDGE ON THE NOAMUNDI-BANSPANI NEW LINE—SOUTH EASTERN RAILWAY

BRIDGE ON THE RIVER SIPRA UNDER CONSTRUCTION—WESTERN RAILWAY



AN OVERSIZE CONSIGNMENT "KILN" BEING TRANSPORTED—NORTHERN RAILWAY



Cluster bridge No. 76 at mile 20/22-23, Bridges No. 52 at mile 14/15, 165 at mile 55/14, 112 at mile 35/5-6 and 78 at mile 21/12-13 on Delhi-Saharanpur Section were completed.

Armco pipe bridges Nos. 61, 62 and 82 have been replaced by Hume pipe culverts at miles 28/1-2, 28/4-5 and 47/10-11 on Jakhal-Hissar Section.

(c) *Protection works.*—Protection and training works have been provided on Tangri bridge No. 294 on Delhi-Saharanpur Section, Chakki bridge on Jullundur-Pathankot Section, bridge over Beas river near Mirthal, girder bridge No. 96 at mile 31/1-2 on Phillaur-Lohian Khas Section, bridge No. 84 at mile 37 near Gidarpindi on Jullundur city-Ferozepore Section, bridges Nos. 1260, 1275, 1277, 1282, 1299, 1300 and 1303 on Saharanpur-Lhaksar Section, bridges Nos. 6, 16, 19 and 20 on Najibabad-Kotdwara branch, bridge No. 1162 on Saharanpur-Moradabad Section and bridge No. 118 and 208 on Lhaksar-Dehra Dun branch.

95. Special Organisation on Railways for review of bridges.—An organisation was set up on each Railway under a Deputy Chief Engineer to—

(i) make a review of all bridges on the railway by examining available data with regard to bridge structure, catchment area, design, flood discharge etc. ;

(ii) examine if the design of bridge structures including foundations, protection works including approaches, etc., are based on sound and practical engineering principles and whether any strengthening of the bridge structure or increasing the waterway, etc., is called for and if so, to determine their nature and extent ;

(iii) make a survey of railway affecting works, *e.g.*, tanks, dams, canals and other irrigation works and examine if the bridges and embankments are adequately safeguarded against failure of railway affecting works ; and if not

(iv) lay down a procedure for maintaining liaison between railway and civil authorities and others in charge of construction and maintenance of railway affecting works, like tanks, dams, canals, etc., to ensure that the safety of the railway line is not endangered by faulty maintenance and operation of these works ; and

(v) make a review of the existing rules and the procedure laid down for the periodical inspection of bridges and formation and precautions laid down for safeguarding them during monsoons and floods to see if they are adequate or not and what additional rules and precautions are required to be taken and what standard information is to be given in bridge inspection registers, etc.

The following four retired railway engineers were also appointed as special experts along with four non-railway engineers to guide the Deputy Chief Engineers in their work :

North Eastern Railway—Shri B. B. Varma, retired General Manager, and Shri Romesh Chandra, retired Chief Engineer, Assam Government.

Northern and Western Railway—Shri P. C. Khanna, retired Chief Engineer and Shri Uttam Singh, retired Superintending Engineer, Central Public Works Department.

Central and Southern Railways—Shri M. R. Venkataram, retired Chief Engineer and Shri J. A. Taraporewala, Chief Scientific Officer, Civil Engineering in the Department of Atomic Energy.

Eastern and South Eastern Railways—Shri S. D. Bamjee, retired Engineer-in-Chief and Dr. Ram Prasad Singh Varma, Special Officer, Technical Education, Industries Department, Government of Bihar.

The terms of reference of these experts were as follows :

(i) to examine the system of maintenance of bridges including entries of inspection in bridge registers, action taken thereon and make recommendations for further improvements;

(ii) to examine bridge records available on the railways and issue instructions, if necessary, to compile the bridge records in a manner which would be found useful for similar review later on ;

(iii) to give general guidance to the Deputy Chief Engineers (Special) of railways on a reference from them on matter like determination of the maximum flood discharge for design purposes, adequacy of waterways, soundness of bridge structures including protection works, etc., and remedial measures to be adopted where

(iv) to make suggestions with regard to premonsoon precautions and system of patrolling to safeguard bridges and vulnerable formations during monsoons, in case this aspect of work comes up before them in connection with items (i), (ii) and (iii) above. necessary ;

96. Formation of Joint Committees of Engineers.—At the conference of the Minister for Railways with Chief Ministers of States held in New Delhi on 5 June 1957, the attention of the Chief Ministers was invited to the fact that a number of works had been and were being carried out in the States, such as irrigation schemes, repairing or abandoning of bunds and tanks and deforestation of large areas, which affected the safety of railway track and bridges but no intimation of this activity was given to the railway administration. As these works considerably change the pattern of flow of flood waters across the railway line, some of the individual railway bridges designed for the original conditions might in the new circumstances be found inadequate. When such works were located at some distance from the railway, the railway administration had no means of knowing anything about them. In the interest of the safety of railways, it was considered imperative that railway authorities were kept in touch with the broad details and progress of such works by the authorities concerned so that steps to ensure safety of track, etc., if necessary, could be taken in time.

There was unanimity of opinion that close co-ordination between railways and civil authorities was desirable. The State governments offered full co-operation in the matter and it was decided that for each state, there should be a committee consisting of senior officers from the railways and public works, irrigation, forest and local self government departments of the State Governments, who would periodically review the position of flood affecting works. The prior approval of this committee was to be secured for any work that was likely to affect the working of another Department.

In pursuance of this decision, joint committees of engineers have been formed in all the States. These Committees hold meetings at predetermined intervals and generally the functions of these committees include—

(*a*) exchange of information about schemes envisaged by any one department and likely to affect the working or safety of assets of another department and consequential safeguards to be adopted ;

(*b*) keeping upto date the list of railway affecting works, etc., naming the officials responsible for joint inspection of each such work immediately after monsoons and, if possible, also in advance of monsoons ; and watching that the department responsible for proper maintenance of such works promptly carries out the necessary repairs ;

(*c*) evolving a procedure for—

(i) obtaining and broadcasting, by departments concerned, warnings or forecasts of heavy rains, floods, storms, etc., as well as the actual heavy rainfall recorded and expected floods downstream, to the officers concerned in the various departments ; and

(ii) inducing public co-operation in promptly conveying to the department concerned any unusual occurrence, *e.g.*, breaches of tanks, etc. ;

(*d*) assessing whether waterways, protection works, etc., provided by any department in an area severely affected by floods have proved to be inadequate and improvements needed for future ;

(*e*) co-ordination of related schemes of the various departments represented.

97. Scheme for enlisting co-operation of local villagers in communicating timely information of abnormal occurrences to avert Train Accidents.—With a view to safeguarding railway tracks against breaches due to heavy rainfall, unexpected floods, overflowing of reservoirs, failure of irrigation works, etc., a scheme has been drawn up so as to reduce the chances of mishap arising from these causes. According to this scheme, the villagers and others living upstream of or close to vulnerable bridges and formations would be encouraged to report immediately any unusual occurrences such as heavy local rainfall, threatened breaches of tanks, heavy floods, etc., to the nearest railway station. The object in view is to obtain timely information where the villagers are in a position to give it. The Ministry of Home Affairs at the instance of the Railway Board addressed all the State governments for necessary co-operation in this matter and to impress on the villagers and others, the necessity of implementing the scheme. Most of the State governments have already issued instructions to their district officers and the details of the scheme have either been worked out or are being worked out in consultation with the local railway administration.

98. Permanent way renewals and welding of rail joints.—The amount spent for track renewal works, the mileage covered and the total number and kind of new sleepers used for complete track renewals, sleeper renewals and casual/spot renewals of sleepers are presented in the accompanying tables. The number and the extent of the mileage covered by welding of rail joints are also shown separately.

A.I.—The amount spent for track renewal works during 1957-8 is given below:

		(Figures in thousands)
		Rs.
Central Railway—		
(*a*) Complete track renewals		5,17,18
(*b*) Rail renewals		17,40
(*c*) Sleeper renewals		15,42
(*d*) Ballast		21,04
	Total	5,71,04
Eastern Railway—		
(*a*) Complete track renewals		2,11,00
(*b*) Rail renewals		65,00
(*c*) Sleeper renewals		61,00
(*d*) Ballast		13,00
	Total	3,50,00
Northern Railway—		
(*a*) Complete track renewals		3,26,07
(*b*) Rail renewals		27,30
(*c*) Sleeper renewals		99,13
(*d*) Ballast		—
	Total	4,97,50
North Eastern Railway—		
(*a*) Complete track renewals		1,49,37
(*b*) Rail renewals		43,65
(*c*) Sleeper renewals		23,83
(*d*) Ballast		13,07
	Total	2,29,92
Northeast Frontier Railway—		
(*a*) Complete track renewals		16,56
(*b*) Rail renewals		1,64
(*c*) Sleeper renewals		22,49
(*d*) Ballast		12,83
	Total	53,52

		(Figures in thousands) Rs.
Southern Railway—		
(a) Complete track renewals		2,48,55
(b) Rail renewals		44,23
(c) Sleeper renewals		1,03,84
(d) Ballast		10,55
	Total	4,07,17
South Eastern Railway—		
(a) Complete track renewals		1,88,22
(b) Rail renewals		86,04
(c) Sleeper renewals		85,57
(d) Ballast		24,34
	Total	3,84,17
Western Railway—		
(a) Complete track renewals		4,42,68
(b) Rail renewals		80,64
(c) Sleeper renewals		2,11,96
(d) Ballast		32,11
	Total	7,67,39

A.II.—The track renewals carried out during the year on different Railways are given below:

Railway	Broad miles	Metre miles	Narrow miles
Complete track renewals			
Central	108·26	24·63	5·00
Eastern	82·71	—	—
Northern	66·56	71·97	—
North Eastern	—	84·28	3·00
Northeast Frontier	—	—	3·00
Southern	41·83	60·02	—
South Eastern	72·46	—	31·58
Western	96·09	55·78	23·56
Rail renewals			
Central	35·55	—	—
Eastern	20·35	—	—
Northern	16·63	—	—
North Eastern	—	0·28	—
Northeast Frontier	—	1·00	—
Southern	18·48	21·16	—
South Eastern	51·38	—	3·00
Western	37·20	9·50	—
Sleeper renewals			
Central	9·25	3·88	24·80
Eastern	12·35	—	—
Northern	56·52	5·00	1·47
North Eastern	—	—	—
Northeast Frontier	—	—	—
Southern	38·22	36·65	—
South Eastern	49·16	—	—
Western	2·00	368·00	—
	Number	Number	Number
Casual sleeper renewal			
Central	108,974	16,149	15,173
Eastern	61,737	—	—
Northern	—	—	—
North Eastern	200	385,183	6,174
Northeast Frontier	200	169,488	6,174
Southern	107,348	240,476	3,701
South Eastern	118,214	—	102,219
Western	7,360	84,470	5,000

Ballast	Cubic feet	Cubic feet	Cubic feet
Central	12,874,597	1,113,483	1,203,873
Eastern	6,513,466	—	—
Northern	6,077,200	4,989,700	73,800
North Eastern	—	3,330,172	—
Northeast Frontier	—	2,600,447	—
Southern	5,341,007	9,369,449	—
South Eastern	3,382,735	—	799,000
Western	3,984,697	8,522,676	291,766

A.III.—Total number and kind of new sleepers used for complete track renewals, sleeper renewals and casual/spot renewals of sleepers—

	Number	Number	Number
Central Railway			
(a) Wooden	111,938	10,179	58,871
(b) Cast Iron	241,699	8,310	—
(c) Steel	3,668	55,412	—
Eastern Railway			
(a) Wooden	60,192	—	—
(b) Cast Iron	185 261	—	—
(c) Steel	25,744	—	—
Northern Railway			
(a) Wooden	110,750	2,290	3,450
(b) Cast Iron	140,560	3,300	—
(c) Steel	7,070	123,350	—
North Eastern Railway			
(a) Wooden	—	260,170	2,715
(b) Cast Iron	—	1,963	—
(c) Steel	—	220,710	—
ortheast Frontier Railway			
(a) Wooden	200	169,488	2,715
(b) Cast Iron	—	—	—
(c) Steel	—	—	—
Southern Railway			
(a) Wooden	96,783	185,859	3,701
(b) Cast Iron	132,870	48,108	—
(c) Steel	81,906	120,632	—
South Eastern Railway			
(a) Wooden	72,706	—	85,290
(b) Cast Iron	251,905	—	—
(c) Steel	66,636	—	—
Western Railway			
(a) Wooden	22,360	218,146	46,000
(b) Cast Iron	183,892	110,571	—
(c) Steel	23,914	589,038	—

A.IV.—Welding of Railway Joints—

Railway	No. of joints welded by Flash Butt	No. of joints welded by Thermit process	Equivalent mileage
Central	4,157	3,544	33
Eastern	16,603	5,916	112
Northern	970	1,344	12
North Eastern	—	—	—
Northeast Frontier	—	—	—
Southern	—	—	—
South Eastern	—	2,902	15
Western	—	22,205	112

99. Arrears of track renewals as well as speed restrictions.

(i) *Arrears of track renewals.*—The arrears of track renewals on 31 March 1958 on different Railways, taking all the gauges, amounted to 6,509 track miles under rail renewals, and 6,630 track miles under sleeper renewals. The details are shown below:

ARREARS OF TRACK RENEWALS

Track miles

Railway	Rail renewals			Sleeper renewals		
	Broad	Metre	Narrow	Broad	Metre	Narrow
Central	998	134	100	724	167	45
Eastern	441	—	—	404	—	—
Northern	539	141	—	1,077	485	16
North Eastern	—	827	—	—	276	—
Northeast Frontier	—	127	10	—	63	10
Southern	368	412	—	372	412	—
South Eastern	459	—	540	456	—	540
Western	666	700	47	614	922	47
	3,471	2,341	697	3,647	2,325	658
		6,509			6,630	

NOTE 1.—This statement shows arrears of rails and sleepers renewals having become due on condition basis on the assumption that existing class of locomotives will continue to run.

2. The arrears in spot/casual renewals of sleepers have been converted into equivalent track miles.

(ii) *Speed restrictions.*—The speed restrictions on account of the condition of track as on 31 March 1958 on different Railways were as follows:

SPEED RESTRICTIONS

Track miles

Railway	Broad	Metre	Narrow	Total
Central	94	..	..	94
Eastern	119	..	.	119
Northern	65	105	..	170
North Eastern	..	370	..	370
Northeast Frontier	..	118	.	118
Southern	235	255	..	490
South Eastern	116	..	68	184
Western	22	242	..	264
	651	1,090	68	1,809

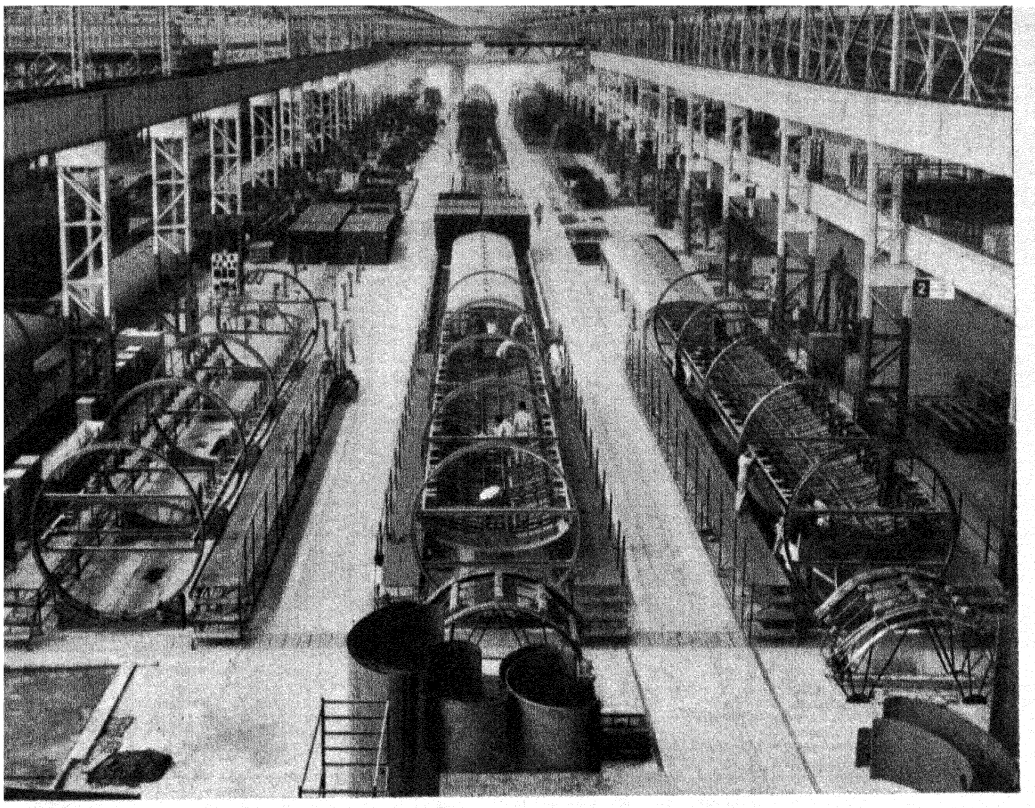
100. Damage caused to railways by floods and cyclones.—The following table gives the extent and character of the more important damages resulting in interruption to traffic for a day or more or costing Rs. 10,000 or more caused by floods and cyclones during the year.

DAMAGE CAUSED TO RAILWAYS BY FLOODS AND CYCLONES

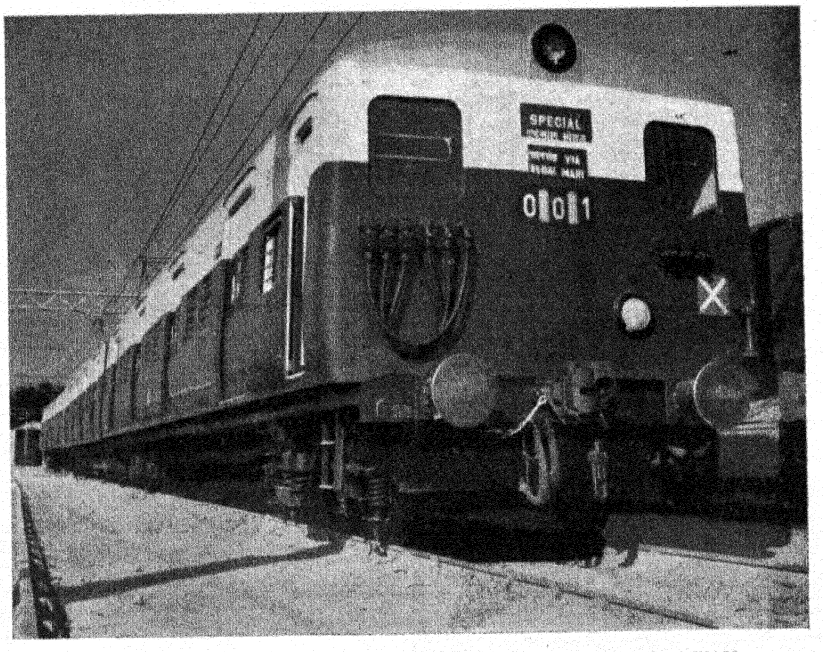
Section affected	Character and extent of damage	Date of damage	Approximate duration of interruption to through communication (In days)	Approximate cost of repairs to damage (In rupees)
1	2	3	4	5
	Central Railway			
Manmad-Secunderabad	Breaches at mile 86/7-9 and 249/0-6	1-8-57	..	10,500
	Eastern Railway			
Dinapore-Division	At Japla 7 Mohammadgunj	..	..	96,100
	Northern Railway			
Jullundur City-Hoshiarpur	Breach measuring 150 × 20' × 2' at mile 14/1-2 occured and packing underneath sleepers were washed away. Water overflowed at mile 11/2-6, 12/8-9 and 14/10-13 and bridges No. 65 and 66 were affected. Packing underneath sleepers was washed away. Track also breached at mile 14/7-15.	24-7-57 and 26-8-57 and 3-9-57	3	22,600
Jullundur-Mukerian Pathankot.	Track at mile 29 and 30/2 affected, slips occured at mile 68/7-9 and packing under sleepers between mile 30/13-16 was washed away.	24-7-57 and 18-8-57	7	19,500
Pathankot-Joginder Nager	Track and pucca side drain at mile 7/6-7 were washed away and bank at miles 46/2-3 and 48/3-4 sank down.	3-9-57	11	30,000

Section affected	Character and extent of damage	Date of damage	Approximate duration of interruption to through communication (In days)	Approximate cost of repairs to damage (In rupees)
1	2	3	4	5
	Northern Railway—contd.			
Amritsar-Dera-Baba Nanak	Track at mile 19/10-11 flooded	27-8-57	5	4,000
Bahjoi and Dhanari	Line breached at mile 58/10 to 59/10 at several places.	15-9-57	4	8,000
A. B. Branch Line	Left Guide Bund nose of Ramganga bridge at mile 4 to 4/9 was washed away.	17-9-57	1	23,100
Lhaksar-Saharanpur	Water level crossed the danger level at bridge No. 1259 and formed scour around pier No. 3 and flat brick floor of bridge at mile 599/17-18 was washed away.	19-7-57 18-8-57 14-9-57	1	8,000
Gajraula-Najibabad	Water overflowed the track at mile 56/5-6 between Basikiratpur & Bijnor.	14-9-57		
Gajraula-Najibabad	Line breached at miles, 18, 1/4-5.11/18	14-9-57	16	30,000
Gajraula-Muazzampur Narain.	Bridge at mile 40/11-12 washed away	14-9-57	16	5,30,000
Khurja-Meerut	Bridge No. 80 at mile 19/5 between Bulandshahr and Baral track and bank rendered unsafe.	17-9-57	1	20,000
Moradabad-Ghaziabad	Line breached at miles 21/8-9, 21/12-17, 22/13-15, 23/5-6, 23/8-9, 24/8-9, 24/16-17 and 24/18-19 between Amroha and Kafurpur.	14-9-57	3	60,000
	North Eastern Railway			
Bhojeepura—Kathgodam	Scour in the bank at mile 31/10	1-8-57	2	44,200
Mathura—Kasganj	Breach in track at mile 194/5-12 and submergence of track at miles 202/14-203/3, 206/2-15 and 209 to 210/5	19-9-57 and 24-9-57	22	69,600
Chupra—Balia	River cut the embankment at miles 19/20	4-8-57	26	2,00,000
Barhagola Rd. Bakhri Stn.	Bridge at mile 16/1 damaged	29-7-57		12,000
Dhamaraghat—Koparia	Bridge at mile 8/9-10 damaged	10-8-57		18,000
Barauni Jn.—Mokamehghat	Bank cutting	8-9-57		10,000
Sonali—Jhaua	Water crossed the danger level at bridges Nos. 90, 92 and 93	6-8-57	7	10,000
Siliguri Jn.—Alipurduar Jn.—Kishanganj.	Water exceeded the danger level and scoured in 4 piers of bridge at mile 38/1-2, scoured in 1 pier of bridge at mile 41/3-4 and only exceeded the danger level of bridge at mile 5/12-13.	28-7-57 to 2-8-57, 7-8-57, 5-8-57 and 10-8-57	7	9,500
Siliguri Jn.—Alipurduar Jn.—Kishanganj.	Bridge at mile 8/2-3 was washed away with a breach of about 50' length and 12' depth.	7-8-57	1	25,000
Siliguri Jn.—Alipurduar Jn.	Flood water reached danger level at bridges Nos 98, 227 and 29	29-7-57, 30-7-57 and 31-7-57	..	3,77,100
Siliguri Jn.—Alipurduar Jn.	Damage in right upstream guide bund of bridges at mile 33/7-8 and 41/2-5.	29-7-57		1,55,500
Dinhata—Cooch Behar	Ballast at mile 22/7-9 and 17/12-13 was washed away and approaches of bridge at mile 22/17-18 were damaged.	31-7-57	1	600
Fakiragram—Chautara	Denial bund at bridge No. 376 was out-flanked and down stream wing approaches of the bridge washed away.	4-8-57	2	13,000
Mariani—Tinsukia	63 units Kutcha quarters	20-4-57	..	26,800
Ledo—Dibrugarh	126 units Kutcha quarters	29-4-57 to 21-8-57	..	32,700
Jorhat—Mariani	86 units Kutcha quarters	28-4-57, 10-5-57, 21-8-57		34,700
Pandu—Lumding	87 units Kutcha quarters	29-4-57	..	75,000
	Southern Railway			
Bellary—Rayadrug	Water over flowed the bridge at mile 23/9-10 and piles 6 to 46 were tilted and uprooted, pile sets 16, 17 and 35 were washed away.	4-10-57, 5-10-57 and from 23-10-57 to 10-11-57	19	20,000
Renigunta—Gudur	Deep scours and heavy washouts at miles 15/11-12 to 12/10-12, 17/4 to 16, 18/0 to 19/2, 20/3-13 22/7 to 23/0, 24/13-15, 26/15 to 27/12, 28/10-13 and 28/15-18, breaches at miles 37/15-18 and scours at mile 38/9-11, bank breaches at many places between Renigunta and Yerpedu and also at bridge No. 116, track breaches at mile 34/12-15, 36/8-10 and washouts at mile 32/9-17 and 36/23, 37/1.	4-11-57 to 6-11-57	17	68,000

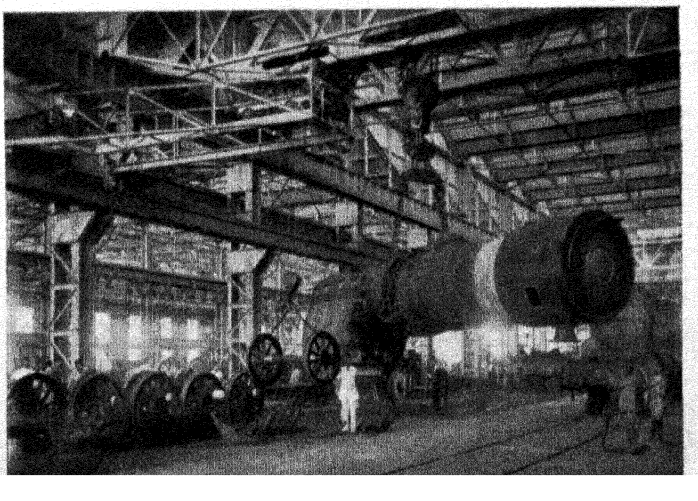
Section affected	Character and extent of damage	Date of damage	Approximate duration of interruption to through communication (In days)	Approximate cost of repairs to damage (In rupees)
1	2	3	4	5
	Southern Railway—contd			
Madras—Bitragunta	Extensive breaches at many places between Mayudupeta and Tada, 9 bridges were affected and at 1 bridge the girders were washed away.	4-11-57	10	10,38,000
Mettupalayam—Ootacamund.	Stone pitching and bank of bridge No. 23 were washed away.	11-11-57	3	1,300
	Western Railway			
Dabhoi—Chhota Udaipur	Breach on side bridge at mile 50/1-2	13-7-57	2	15,000
Baran Station	Breach of 100 yard length between up facing points and up outer signal.	22/23-7-57	1	3,000
Sawai Madhopur Station	Main line new bank eroded and track sunk between Station and North Cabin.	21-7-57	.	10,600
Jaipur—Sanganer Town—Toda Raisingh.	Breaches at miles 16/1-2, 16/4-5 and 16/17-18	22-7-57	2	1,500
Jaipur—Sawai Modhopur	Track to the extent of 2·3 miles between miles 16/6 and 18/12 was damaged.	22-7-57	7	1,08,800
Jaipur—Sikar	Bank to the extent of 100 ft on either side of bridge No. 111 at mile 1000/13-14 between Chomu Samod and Govindgarh Malikpur was washed away.	23-7-57	3	2,000
Surendranagar—Bhavnagar	Breaches at mile 13/4-8 to 12	14-7-57	2	3,900
Ningala—Gadhada Swaminarayan.	Line breached at mile 0/7 to 7/11	14-7-57	3	1,500
Mahuva—Mahuva Bunder	Fourth pier of bridge at mile 83/3-8 and abutment and return wall were washed away.	Goods traffic was suspended from 16-7-57 to 24-9-57	..	1,500
Shapur—Saradiya	Bank washed away at mile 6/10-13	15-7-57	5	18,700
Kanalus—Katkola	Bank at miles 25/5-6, 24/ 11-12, 24/4-5, 19/14-15, 18/14-15, 18/7-8 14/1-2, 7/8-9, and 6/14-15 and partly at mile 13/18-14/1 and bank next to abutment of bridge No. 3. at mile 8/8-11 was washed away.	23-6-57	4	7,800
Jaipur Sanganer Town Toda Raisingh.	20 ft length track at mile 22/6 to 22/8 between Phagi and Namera was affected and bank to the extent of 80 ft. in approaches of cultverts No. 51, 52 and 53 at mile 22/7-8 was washed away.	24-7-57 and 17-8-57	1	1,300



A VIEW OF THE 3 ASSEMBLY LINES IN THE MAIN ASSEMBLY SHOP—INTEGRAL COACH FACTORY



NEW ELECTRIC MULTIPLE UNIT COACH—EASTERN RAILWAY



INTERIOR OF ERECTING SHOP OF DOHAD WORKSHO WESTERN RAILWA

CHAPTER V

MECHANICAL AND ELECTRICAL ENGINEERING AND ROLLING STOCK

A. MECHANICAL ENGINEERING

101. Renewals and additions to equipment.

Locomotives.—The new locomotives ordered in India and abroad during the year totalled 348 and were distributed as follows:

(*a*) Broad gauge	282
(*b*) Metre gauge	60
(*c*) Narrow gauge	6
Total	348

The total number of new locomotives placed on line during the year, was 603 as detailed below:

(*a*) Broad gauge	225
(*b*) Metre gauge	378
(*c*) Narrow gauge	—
Total	603

Out of the order for 282 Broad gauge Locomotives an order for 100 Electric Locomotives was placed on the Group for Study and Electrification of Railways, Zurich, another order for 10 Electric Locomotives was placed in Japan. The order for remaining 172 WG Locomotives was placed on Chittaranjan Locomotive Works.

The order for 60 YG Metre gauge Locomotives was placed on Tata Locomotive and Engineering Company Limited, Jamshedpur and orders for 6 Narrow gauge Locomotives were placed on two foreign firms one in Japan for 4 Narrow gauge Locomotives and the other in United Kingdom for two Locomotives.

Coaching stock.—(a) In addition to utilising the carriage-building capacity in railway workshops, orders were placed on firms building carriages and/or wagons, within the country for the supply of 759 Broad gauge and 448 Metre gauge coaching vehicles. The distribution of these orders was as follows :

	(In units) Broad	Metre
Indigenous		
All-steel passenger coaches (Third class fully furnished)	180	300
All-steel integral light weight unfurnished passenger coaches	350	—
Other coaching vehicles (Motor and Parcel Vans)	229	148
	759	448

(b) 915 Broad gauge, 424 Metre gauge and 69 Narrow gauge coaching vehicles were placed on line, the details of which are given below :

	(In units) Broad	Metre	Narrow
Manufactured in railway workshops—			
Passenger coaches: Fully air-conditioned	9	..	..
Passenger coaches: Partially air-conditioned and composite	17	15	..
Passenger coaches: Upper class and composite	40	67	8
Passenger coaches: Lower class and composite	202	158	61
Other coaching vehicles	110	44	..
Manufactured at Messrs. Hindustan Aircraft Ltd.			
All-steel coaches Third class	170	..	..
Constructed by other Indian manufacturers, including Integral Coach Factory, Perambur, and furnished in Railway Workshops.			
Lower class	207	129	..
Other coaching vehicles (Motor and Parcel Vans)	7	..	..
Imported			
Electric Multiple Unit coaches	141	..	..
Rail Cars	12	..	..
Shells furnished in Southern Railway workshop Lower class	..	11	..
	915	424	69

Goods wagons.—The number of wagons ordered and placed on line during the year is given below :

	(In terms of 4-wheelers)		
	Broad	Metre	Narrow
(1) Number ordered	1,632	962	..
(2) Number placed on line	19,894	9,674	66
Indigenous	13,088	4,082	46
Foreign	6,806	5,592	20

The number ordered includes 1,624 Broad gauge, and 600 Metre gauge general service wagons, 8 Broad gauge underframes for tank wagons and 362 Metre gauge special type wagons. All these wagons were ordered on indigenous firms. The number of wagons ordered during 1957-8 is small as compared to the available capacity, because orders for about 15,000 wagons, which were also provided against 1957-8 Rolling-stock Programme, were placed in the financial year 1956-7.

The number placed on line during the year consists of 16,322 Broad gauge, 8,025 Metre gauge and 54 Narrow gauge general service wagons, 856 Broad gauge and 386 Metre gauge tank wagons, and 2,716 Broad gauge, 1,263 Metre gauge and 12 Narrow gauge other special type wagons.

A reference may be made here of the 282 units of 'BOBS' type Broad gauge bogie hopper wagons placed on line during the year, for the transport of iron ore and coal.

102. Locomotives.—The average tractive effort per steam locomotive on Government Railways during 1957-8 as compared with 1956-7 showed an increase on both Broad and Metre gauges. The average tractive effort per diesel electric locomotive showed an increase in the case of Broad gauge but remained the same as during the last year on both the gauges in the case of diesel hydraulic and mechanical locomotives. The average tractive effort per electric locomotive remained unchanged on the Metre gauge but declined a little on the Broad gauge due to twelve newly added locomotives on the Eastern Railway being of a lower tractive effort. The detailed figures for the different classes of locomotives are shown in the following table:

Average Tractive Effort per engine in lbs.

Locomotives	Broad gauge		Metre gauge	
	1956-7	1957-8	1956-7	1957-8
Steam	30,596	31,038	17,366	17,382
Diesel Hydraulic and Mechanical	29,667	29,667	10,060	10,060
Diesel Electric	26,965	37,254	—	—
Electric	34,560	34,472	10,400	10,400

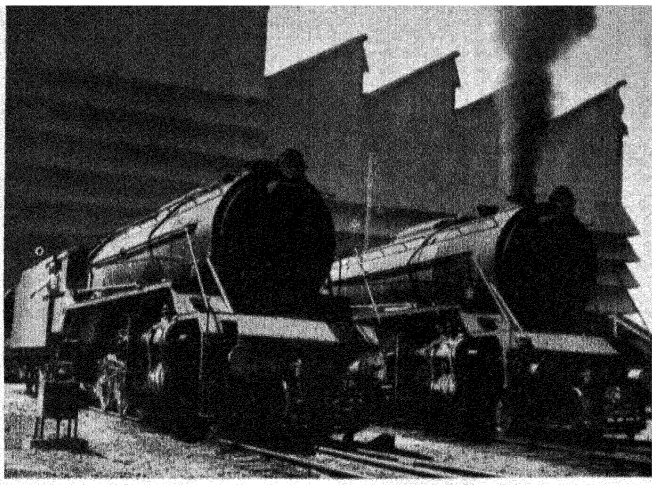
103. Manufacture of locomotives and boilers in India.

Locomotives.—The Chittaranjan Locomotive Works, during 1957-8 produced 164 WG locomotives and thus completed its 668th WG by the end of the year. The outturn of locomotives at Chittaranjan Locomotive Works has been maintained at an average rate of 14 Locomotives per month. It has been decided to stabilize production at Chittaranjan Locomotive Works at the rate of 14 WG locomotives per month. This is equivalent to 200 average size locomotives annually. It has also been decided to develop capacity to produce all the components including boilers for locomotives other than a few proprietary and trade items.

The Tata Locomotive and Engineering Company, Ltd., have turned out 85 Metre gauge locomotives during the year as against 67 during the previous year.

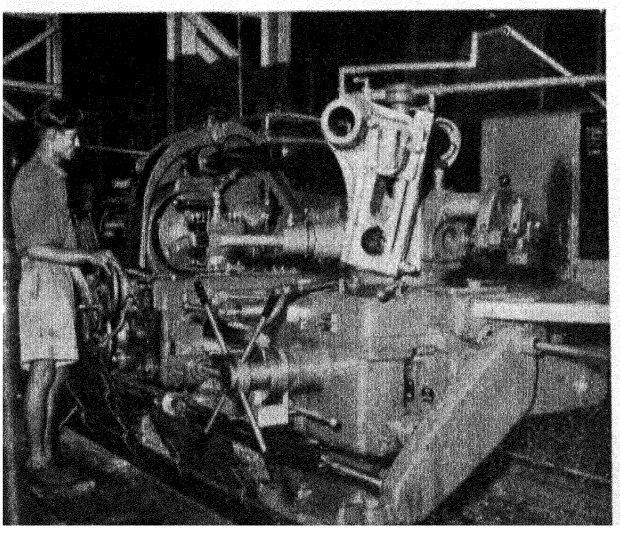
Boilers.—The Chittaranjan Locomotive Works have manufactured 142 locomotive boilers during the year which have been fitted to the locomotives produced by them. An outturn of 15 locomotive boilers per month

G. LOCOMOTIVES COMING OUT OF MAIN SEMBLY SHOP—CHITTARANJAN LOCOMOTIVE WORKS





VIEW OF BOILER SHOP—CHITTARANJAN LOCOMOTIVE WORKS



FINISHING OF LOCO COMPONENTS ON TURRET LATHE—CHITTARANJAN LOCOMOTIVE WORKS

has been achieved in the month of December 1957. Since the commencement of boiler production at the Chittaranjan Locomotive Works, 480 WG boilers have been turned out there up to 31 March 1958.

An order for 30 YP/YG and 12 YL spare boilers has been placed on Messrs Textile Machinery Corporation Ltd., Calcutta during 1957-8 and 15 WP/WG boilers were ordered on Chittaranjan Locomotive Works against 1957-8 Rolling-Stock Programme, but no boiler was manufactured against these orders during 1957-8.

104. Improvements to workshops, running sheds, carriage and wagon depots.—Progress was made on a number of expansion schemes which had been planned to meet the rapidly increasing repair load during the Second Five Year Plan period. Additional items of works were also sanctioned in connection with the proposed increase of repair capacity in the workshops. Similar progress was made with the remodelling and expansion of a number of running sheds and carriage and wagon depots during the period under review. Additional running sheds as also further expansion to some of the existing running sheds and carriage and wagon depots were also sanctioned during the year. All these items of works form part of the overall expansion in connection with the Second Plan requirements.

105. Progress of new workshops.—The preliminary work of the Locomotive component works, set up near Banaras, for manufacturing duplicate components for Standard locomotives, carriages and wagons to meet the maintenance requirements of increased rolling-stock holdings during the Second Five Year Plan recorded good progress.

Some progress was also made in the preliminary work in connection with the stabilization scheme of the Chittaranjan Locomotive Works which has been sanctioned mainly for the purpose of reducing to the absolute minimum the foreign content element in the locomotives produced by this unit.

106. Fitting of automatic vacuum brakes to Metre gauge stock.—In view of the urgent need to increase the speed of goods trains on the Metre gauge, the progress of the work of fitting automatic vacuum brake to Metre gauge stock on all Railways was assessed. As the position on the Central and Southern Railways was found satisfactory, it has been decided that, in the case of the Southern Metre gauge Pool (comprised of the Central and Southern Railways), stock which do not have full vacuum connection from coupling-to-coupling should be rejected at interchange points with effect from 1 October 1958. In the Northern Metre gauge Pool, where the work has not so far been completed, the rejection rule is expected to be introduced sometime in 1959.

107. Repairs to locomotives in railway workshops and running sheds.—Compared with 1956-7, the average number of locomotives under or awaiting repairs in workshops and running sheds on the Broad gauge registered a slight decrease while there was slight increase on the Metre gauge. The percentage of locomotive under repairs on the Broad gauge showed progressive improvement while on the Metre gauge in the case of workshops, it registered slight deterioration, as shown by figures summarised in the following table:

AVERAGE NUMBER OF STEAM LOCOMOTIVES UNDER OR AWAITING REPAIRS

Gauge	Year	Mechanical workshops		Sheds and Transportation shops	
		Number*	Percentage to average total No. on line.	Number*	Percentage to average total No. on line.
Broad	1956-7	270	4·63	653†	11·2†
	1957-8	259	4·62	641	10·7
Metre	1956-7	194	6·43	286	9·48
	1957-8	216	6·53	304	9·19

*Includes figures of Diesel-Electric locomotives.

†Revised figures.

all, 154 stations have been electrified during the year under review as detailed below :

Railway	No. of Stations electrified
Central	8
Eastern	22
Northern	26
North Eastern	21
Southern	65
South Eastern	6
Western	6
TOTAL	154

111. Electric traction.—In the Second Five Year Plan, there is a provision of Rs. 80 crores for electrification schemes of Indian Railways.

The electrification on 3000 volts D.C. of Howrah-Burdwan Main line via Bandel and Sheoraphuli-Tarakeshwar branch of Eastern Railway covering a length of 88 route miles was sanctioned in June 1954. The work on this section is progressing satisfactorily. The first electrically operated train services between Howrah-Sheoraphuli was introduced on 30 November 1957 and regular train services hauled by electric locomotives on and from 1 December 1957. Train services hauled by electric locomotives on the Howrah-Bandel section was inaugurated by the Prime Minister on 14 December 1957.

The electrification of Howrah-Burdwan section was sanctioned on 3000 Volts D.C. system. Since then the French National Railways have carried out extensive investigations on one of their main lines on electrification at 25 KV, 50 cycles, Single-phase A.C. system, which have been followed by similar investigations on the Japanese National Railways and the British Railways. These experiments confirmed the superiority of Ignitron type A.C. locomotives over D.C. locomotives of the same weight, in hauling capacity. It is this and the other economies on fixed installations which turned the balance in favour of electrification on 25 KV, 50 cycles, Single-phase A.C. system.

An investigation on the suitability and economies of 25 KV, A.C. vis-a-vis 3000 Volts D.C. was also carried out by Nouvion Mission through the kind offer of the S. N. C. F. (French National Railways) for electrification of some of the sections proposed to be electrified on the Indian Railways during the Second Plan Period. The Nouvion Mission recommended the adoption of 25 KV A.C. system for main line electrification. The Railway Board after careful consideration decided to adopt the A. C. 25 KV Single-phase, 50 cycle electric traction system on Eastern and South Eastern Railways, including suburban sections in Calcutta area. As the Indian Railways have no experience of the new A.C. system, the French National Railways (Societe Nationale des Chemins de Fer Francais) have been appointed as Technical Associates. A Project Organisation working under an Engineer-in-Chief started functioning from September 1957. An order for 100 mixed traffic type A.C. electric locomotives was placed on the "Group" of continental firms and an order for 10 A.C. electric locomotives was placed on Mitsubishi, Japan. Global tenders were also invited for overhead equipment for 700 route miles of track.

112. Battery-charging sets installed at stations.—For efficient maintenance of train lighting batteries, there were 322 battery charging sets installed at 188 stations until 31 March 1957. With the increase in the number of coaches and longer halts on platforms at terminal stations, etc., it was found necessary to provide 66 additional sets at 59 stations during the year under review.

113. Electric power for railways.—Electric energy on railways is used for various purposes such as electric traction, machinery in the workshops, sheds, etc., pumps, lighting of offices, stations and staff colonies, air-conditioning of offices, hospitals, wireless stations, control rooms, etc., and for operating fans, lights and air-conditioning equipment in running trains. Except for the last three items necessary electric power is obtained either from the railways' own generating stations or purchased from power supply authorities.

During the year under review, Indian Railways maintained 143 power stations with a total installed capacity of 178,328 KW. Energy generated in the railway power houses and purchased from other supply authorities was as follows :

(*a*) Total energy generated by railway power houses	674,079,645	kwh
(i) Energy consumed for railway work including losses in transmission and distribution	451,463,097	,,
(ii) Energy supplied to the railway staff	5,377,926	,,
(iii) Energy sold to public	217,238,622	,,
(*b*) Total energy purchased from power supply authorities	258,359,420	kwh
(i) Energy consumed for railway work including losses in transmission and distribution	244,419,525	,,
(ii) Energy supplied to railway staff	11,144,685	,,
(iii) Energy sold to public	2,795,210	,,

114. Installation of air-conditioning plants in offices, etc.—Up to 31 March 1957, 191 air-conditioning plants were installed in railway offices, hospitals, etc. During the year under review, 161 additional air-conditioning plants have been installed.

115. Provision of water coolers.—The progress of the provision of water coolers at railway stations, workshops, offices, etc., has been satisfactory. During the year, 177 water coolers have been added.

CHAPTER VI

RESEARCH, DESIGN AND STANDARDIZATION

116. General.—The Research orginazation continued investigations on Civil Engineering, Mechanical Engineering, and Metallurgical and Chemical problems referred to it. It also carried out tests on equipment and materials received, and intended for Railway use. The Research centre continued publication of the Indian Railway Technical Bulletin, the preparation of documentation notes from technical magazines, and the publication of technical papers and monographs. During the year, the Indian Railways became an associate member of the International Union of Railways (UIC), and of the office of Research and Experimentation (ORE) ; the Research Centre was nominated as the co-ordinating office for all references to these Organizations.

The Design and Standardization Wing continued its activities of design and standardization, and the inspection of certain equipment manufactured indigenously. It also provided consultation services to the Railway Board, the Railways, the manufacturers of Railway stores in India and abroad, and the Directorate of Inspection. The Design Office continued to avail of the services of the expert Design Engineer from the Minden Organization of the German Federal Railways referred to in last year's report. This office accepted for training 6 Special Class Apprentices and 28 temporary Assistant Mechanical Engineers during the year.

A. RESEARCH ORGANIZATION

117. Civil engineering research.—The Civil Engineering sub-centre was shifted from Lonavla to Lucknow. The research activities relating to Civil Engineering Works consisted of tests on rails, the development of concrete sleepers, and the stress analysis of rails and rail fittings under controlled conditions. The Building Research Section carried out research on foundations on shrinkable soil, the development of stabilised soil building blocks, the use of coal ash for building purposes, and studies on temperature variations in buildings with variable roof heights and walling materials.

The Soil Mechanics Section evolved a classification test for clay soil, continued investigations on black cotton soil with the assistance of the National Chemical Laboratory, Poona, and tested 800 soil samples sent to it by various Railways. It also carried out studies on concrete and mortar and investigations on the effect of wind pressure on platform shelters in the wind tunnel of the Indian Institute of Sciences, Bangalore.

118. Mechanical engineering research and testing.—Investigations on the failure of bogie frames of air-conditioned trains, and the failure of barrel plates of petrol tank wagons were carried out. In addition, a large number of tests on equipment and materials were conducted ; notably the testing of boilers fitted with and without thermic syphons ; performance and capacity rating tests on the new 1950/1800 HP Alco. Diesel Locomotives ; riding quality trials of passenger vehicles fitted with various designs of bogies ; tests on WP locomotives fitted with friction fabric liners on the front and high tracks, and with constant resistance lateral controls.

119. Metallurgical and chemical research.—The Research Centre developed a bituminous emulsion for use as an anti-corrosive paint for which a patent has been obtained. It continued work on the preparation of emulsion and resin from cashew-nut shell, and the development of spherodial graphite cast iron bearing shells lined with white metal for use on wagons. It also tested various materials offered by indigenous manufacturers for Railway use, *e.g.*, welding electrodes. It investigated important cases of metal failure, such as axle failures on WP and WG locomotives, the cracking of WP bar frames,

and the failure of Yamuna Bridge (Agra) stringers. Work on the treatment of locomotive feed waters was continued, and indigenous tannin developed for replacement of imported water softening compounds.

B. DESIGN AND STANDARDIZATION

120. Standards committees.—The Design and Standardization Wing convened and co-ordinated the annual meetings of seven Standard Committees relating to Locomotives, Carriage and Wagon, Bridge and Structures, Track, Signalling and Inter-locking, Electrical and Specifications standards. Standardization of railway equipment to bring it in line with modern practice continued, while the examination of new equipment to meet the expanding needs of transport, both from the design and financial angles formed an increasing part of this Organisation's functions.

121. Civil engineering designs.—Standard designs were prepared for bridges, loco. shed structures, and new designs were developed for reinforced concrete sleepers, expansion joints for long welded rails, rail fittings and spring point lever.

122. Signal designs and standardization.—An inter-locking ground frame (six levers) and other signal mechanisms, block instruments and circuit controllers were standardised. Designs for signalling equipment received from indigenous manufactures were examined and existing designs modified to permit indigenous manufacture of equipment, such as, point rodding, wire pullies, point mechanisms, clutch levers, etc. The Signalling Section also assisted in the development of the token-less block instrument on the South Eastern Railway and the use of aluminium reflective sheeting for signal sighting boards to improve the distance of visibility.

123. Architectural designs.—The Architectural Wing undertook the design of important buildings such as 630 quarters with general amenities for the I. C. F. Furnishing Wing, additional block of offices for the Northeast Frontier Railway at Pandu, and for the Northern Railway at New Delhi, station building at Bhagalpur and a new hall and offices near suburban platform at Howrah. Working and detail drawings for various important buildings such as Divisional Offices on the Southern Railway, hospital for Western Railway, station buildings at Churchgate, Bombay, Allahabad and Jaipur, etc., were also furnished.

124. Locomotive designs.—The Locomotive Design office was engaged in the design of a new 6-wheel bogie tender having a capacity of 18 tons coal and 9,000 gallons water, of a welded WG boiler for production in Chittaranjan Locomotive Works, the design of a hydro static dosing gear for water treatment of Steam locomotives and the preparation of detailed drawings of XE locomotives. Studies relating to future demands of Steam, Diesel and Electric locomotives and the possibility of improving haulage capacity and speed with existing locomotives were also undertaken. A Steam Locomotive Design Code was compiled.

125. Carriage and wagon designs.—The layout of third class integral light weight coaches, and the design of roof ventilators were completed ; preliminary drawings for refrigerated van for transport of fish, and for a Broad gauge coaching underframe 68 ft. long were prepared ; and the modification of IRS bogies for use under the air-conditioned vestibule trains, and modifications to layout of partially air-conditioned coaches to provide an attendant's compartment were carried out. Designs were also prepared for 80-ton bogie open wagon of welded and partially welded construction, of a hot metal wagon and of water tank wagons. Preliminary designs for a heavy duty bogie open wagon with rivetted construction and Metre gauge molasses tank wagon were prepared. A high capacity screw coupling, draft gear and draw hooks for Broad gauge stock were also completed. The Carriage and Wagon Section also undertook design and standardization work for train lighting equipment, technical investigation of the fitting of centre buffer couplers, improvement in the mounting of TPR barrels, the design of tank wagons for carrying liquid petrolium gas, long-shackle suspension for wagons, design of a bogie covered

wagon of all welded construction, and proposed maximum moving dimensions for future Broad gauge stock.

126. Introduction of Metric system.—In pursuance of the recommendations of the Railway Metric Committee for the implementation of the "Weights and Measures Act (1956)", the Design Offices have commenced work on the introduction of metric system of weights and measures on all standard designs and specifications. In this connection, the BG Schedule of Dimensions has been redrafted, and metric dimensions are being shown together with foot dimensions on new designs of buildings. The IRS Limits and Fits Book for use in Locomotive Work has also been compiled in the metric system and circulated to Railways.

CHAPTER VII

RAILWAY EQUIPMENT AND STORES

127. General.—Total purchases of Railways during 1957-8 touched a new level of Rs. 221 crores, thus registering an increase of Rs. 50 crores or 29 per cent over the figure of Rs. 171 crores during 1956-7. This was in consonance with the increased requirements of rolling-stock, track materials, and other miscellaneous stores required to meet the needs of traffic expected to be developed as a result of the impact of the Second Five Year Plan.

The purchases of *Khadi* to meet the textile requirements of the Railways also showed an increase. There was an overall increase of about 14 per cent in the amount spent on this account, over the previous year.

In view of continued difficult supply position of steel, particularly permanent way materials, non-availability of which was seriously holding up progress of the plan, the work relating to the procurement, by import, of steel track materials for the Railways, which was hitherto undertaken by the Iron and Steel Controller, was taken over by the Railway Board with effect from 1 April 1957 and a Steel Purchase Mission was sent abroad to contact the producers, to scrutinize their quotations and to place orders for the import of steel. As a result, there was an improvement in the supply position of steel to the Railways during the year 1957-8 as compared with 1956-7.

The supply of timber improved during the year under review. Every effort was made to meet the requirements through indigenous sources. However, as indigenous teak was in short supply, arrangements had to be made to import about 15,000 tons of Burma teak constituting nearly 28 per cent of the total requirements. Supply position of cement continued to cause some anxiety as only 68·5 per cent of the total requirements was allotted to the Railways by the Ministry of Commerce and Industry.

A nucleus Development Co-ordination Cell under the Stores Directorate in the Railway Board's Office, set up in 1956 as recommended by the Railway Equipment Committee, has been entrusted with the task of developing indigenous capacity for such items as are generally imported or for which sufficient capacity does not exist in the country.

A. PURCHASES

128. Value of railway equipment and stores ordered.—A statement showing the value of railway equipment and stores ordered through the various sources; viz., (1) Ministry of Works, Housing and Supply, (2) Other Ministries, (3) Railway Board and (4) Railways direct during 1957-8, as compared with the value of similar orders placed during 1956-7 is given on the next page. The Railway Board continued to purchase during the year as in previous years, certain important rolling stock items like locomotives, coaches and wagons. In addition the Railway Board with effect from 1 April 1957 took over from the Iron and Steel Controller, the work of purchasing of imported identifiable railway steel items and sent a Railway Steel Purchase Mission to the United Kingdom and the continent to purchase important railway steel materials such as rails, fishplates, pig iron, steel sleepers, bearing plates, plates for wagon builders, etc. Orders were also placed by the Railway Board on indigenous sources for cast iron sleepers and for wooden sleepers and bridge girders from imports.

VALUE OF RAILWAY EQUIPMENT AND STORES ORDERED

(In lakhs of rupees)

Year	Total value of equipment and stores ordered	Value of equipment and stores ordered through the Ministry of Works, Housing and Supply	Value of equipment and stores ordered through other Ministries	Value of equipment and stores ordered by the Railway Board	Value of equipment and stores ordered by Railways direct
(1)	(2)	(3)	(4)	(5)	(6)
1956-7					
(a) Value	2,48,24·89	68,18·39	27,13·40	81,01·00	71,92·10
(b) Percentage	100·00	27·47	10·93	32·63	28·97
1957-8					
(a) Value	**2,92,03·67**	**81,82·63**	**31,85·51**	**86,79·00***	**91,56·53****
(b) Percentage	**100·00**	**28·02**	**10·91**	**29·72**	**31·35**

* The amount includes Rs. 37,22·00 lakhs for the purchase of steel and pig iron.

** The amount includes Rs. 31,56·16 lakhs for the purchase of steel, the planning and allotment of which is done by the Iron and Steel Controller, while the formal orders and the payments are made by the Railways direct. The corresponding figure against 1956-7 is Rs. 21,26·47 lakhs which is included in the figure of Rs. 71,92·10 lakhs under column 6.

129. Payments made for Railway equipment and stores.—The payments made in respect of equipment and stores by the Government Railways during the year 1957-8 amounted to Rs. 2,21,83·27 lakhs as against Rs. 1,71,37·48 lakhs last year. The payments made for indigenous and imported materials increased by Rs. 32,65·59 lakhs and Rs. 17,80·20 lakhs respectively.

The statement below summarises the details of the payments during 1957-8 and the corresponding figures for 1956-7. All the stores except those classified under 'A' and 'B' recorded increases.

PAYMENTS MADE FOR RAILWAY MATERIALS DURING 1957-8*

(In lakhs of rupees)

Classes of stores	Imported materials			Indigenous materials	Total	
	Purchased direct	Purchased through agents in India	Total imported materials		1957-8	1956-7
(a) Bridge work and its parts fittings and special fastenings	..	·02	·02	3·75	**3·77**	17·61
(b) Engineering plant and components including all hand and power machinery	·43	20·30	20·73	35·84	**56·57**	58·98
(c) Workshop machinery, plant and equipment including pneumatic machinery and tools	63·28	1,19·90	1,83·18	89·65	**2,72·83**	2,59·85
(d) Permanent way material and track tools	2,80·18	12,46·27	15,26·45	24,00·99	**39,27·44**	24,55·87
(e) Rolling-stock	22,96·16	9,08·59	32,04·75	48,44.99	**80,49·74**	68,94·37
(f) Building materials, water mains, sewage system and track and yard enclosing materials and signal and interlocking materials, etc.	8·09	77·49	85·58	8,50·09	**9,35·67**	4,89·99
(g) Stores, hardware, copper, tin and zincware, all leather, canvas, India rubber in bulk, metals, painters stores, timber and fuel oil, etc.	43·59	10,58·67	11,02·26	65,48·54	**76,50·80**	62,49·75
(h) Electrical and train and locomotive lighting plants and materials, etc., and telegraph and telephone equipment	18·44	1.78·30	1,96·74	7,35·46	**9,32·20**	5,39·83
All other stores	..	15·52	15·52	3,38·73	**3,54·25**	1,71·23
TOTAL	27,10·17	36,25·06	63,35·23	1,58,48·04	**2,21,83·27**	1,71,37·48

* The detailed figures are given in Statement 38 of Volume II of this Report.

130. Purchase of stores within the country.—The total payments made for the railway equipment and stores during 1957-8 amounted to Rs. 2,21,83.27 lakhs. Of this the value of direct imports was Rs. 27,10.17 lakhs and the imported material purchased in India accounted for Rs. 36,25.06 lakhs. The balance of the payments was for equipment and stores of Indian manufacture or indigenous origin which accounted for 71.44 per cent of the total expenditure. The comparative figures for 1956-7 and 1957-8 are given below:

PURCHASE OF STORES

(In lakhs of rupees)

Year	Amount of payments made for equipment and stores imported direct	Amount of payments made for imported equipment and stores purchased in India	Amount of payments made for equipment and stores of Indian manufacture or indigenous origin	Total payment made for imported and indigenous equipment and stores	Percentage of column No. 4 to column No. 5
(1)	(2)	(3)	(4)	(5)	(6)
1956-7	19,85·38	25,69·65	1,25,82·45	1,71,37·48	73·42
1957-8	**27,10·17**	**36,25·06**	**1,58,48·04**	**2,21,83·27**	**71·44**

131. Purchase of stores from cottage and small-scale industries.—The value of purchases of stores falling under the category of cottage and small-scale industries products, made by the Railways during 1957-8 and 1956-7 are given below:

PURCHASE OF COTTAGE AND SMALL-SCALE INDUSTRIES PRODUCTS

Railway	1956-7 Rs.	1957-8 Rs.
Central	32,20,000	34,92,000
Eastern	41,97,000	68,09,927
Northern	5,79,000	6,85,068
North Eastern	1,04,92,000	1,05,97,000
Southern	32,84,000	22,12,000
South Eastern	19,50,000	13,33,000
Western	1,10,08,000	96,46,000
Chittaranjan Locomotive Works	30,00,000	9,31,000
Integral Coach Factory	36,756	9,000
Ganga Bridge Project	16,600	1,13,300
TOTAL	3,77,83,356	3,58,28,295

132. Use of *Khadi* on Railways.—Instructions already exist for making the maximum use of *Khadi* (as distinct from handloom and mill made cloth) on the Railways, in meeting, as far as possible, their requirements of various items enumerated in paragraph 111 of the Board's Annual Report for 1954-5.

Further, in order to promote the use of *Khadi* for uniforms, the Railway Board have extended the use of thick blue *Dosuti Khadi* and blue *khadi pugree* in lieu of mill made blue drill and *pugree* cloth for uniforms, etc.

TOTAL VALUE OF PURCHASES OF *Khadi* DURING THE YEARS 1956-7 AND 1957-8

Railway	1956-7 Rs.	1957-8 Rs.
Central	12,93,000	6,65,000
Eastern	5,91,720	12,33,700
Northern	10,84,053	18,78,667
North Eastern	15,61,894	10,00,000
Southern	2,69,351	4,52,692
South Eastern	3,16,249	4,07,007
Western	2,41,874	5,04,706
Chittaranjan Locomotive Works	29,016	14,800
Integral Coach Factory	10,372	9,105
Ganga Bridge Project	1,160	1,644
TOTAL	53,98,689	61,67,321

NOTE.—Additional expenditure incurred on account of introduction of *Khadi* during 1957-8 was approximately Rs. 21·75 lakhs.

B. STORES TRANSACTIONS ON THE RAILWAYS

133. Review of Annual Stores Transactions and Stores balances.—The summary of the statement of stores transactions (Cap. 9500) on Indian Railways during 1957-8, details about which are contained in statement 39 of Volume II of this Report, is given below:

STORES TRANSACTION—GOVERNMENT RAILWAYS

(In thousands of rupees)

Railways	Opening balance at the beginning of the year (1-4-1957)			Receipts during the year	Issues during the year	Closing Balance at the end of the year (31-3-1958)		
	Balance without adjustment	Adjustment**	Total			Balance without adjustment	Adjustment**	Total
Central	12,98,65	95,32	13,93,97	24,87,69	20,52,39	17,33,95	1,10,04	18,43,99
Eastern	8,43,58	1,89,78	10,33,36	19,19,25	16,38,42	11,24,41	1,45,10	12,69,51
Northern	8,77,03	1,28,98	10,06,01	17,50,40	14,35,44	11,91,99	53,82	12,45,81
North Eastern	4,32,40	2,58,49	9,07,46	9,37,30	7,99,86	5,69,84	3,11,23	11,72,15
Northeast Frontier	2,16,57			4,15,10	3,40,59	2,91,08		
Southern	8,64,42	55,63	9,20,05	11,22,35	9,39,23	10,47,54	1,57,54	12,05,08
South Eastern	7,30,71	79,84	8,10,55	18,80,61	15,74,83	10,36,46*	75,88	11,12,34
Western	8,07,94	76,06	8,84,00	31,84,13	28,84,14	11,07,93	43,04	11,50,97
Chittaranjan Locomotive Works	3,27,99	(−)38,94	2,89,05	10,38,80	9,60,36	4,06,43	8,49	4,14,92
Integral Coach Factory	95,01	7	95,08	3,45,26	1,89,59	2,50,68	42	2,51,10
TOTAL	64,94,30	8,45,23	73,39,53	1,50,80,89	1,28,14,85	87,60,31*	9,05,56	96,65,87
Other Railway Projects	1,16,68	—	1,16,68	—	—	1,38,89	—	1,38,89
GRAND TOTAL	66,10,98	8,45,23	74,56,21	1,50,80,89	1,28,14,85	88,99,20*	9,05,56	98,04,76

* The difference of 3 in the closing balance is due to transfer without financial adjustments on South Eastern Railway.

** Represents difference between the figures as per Appropriation Accounts and as furnished by the Railways on account of stores-in-transit, stock adjustment account and difference between Price Ledgers and General Books, etc.

The increase of Rs. 23,49 lakhs approximately in the closing balance is partly due to increased consumption on account of increased maintenance and operational activity on the Railways and partly due to increase in overall price level, as also due to works and permanent way materials obtained in connection with the execution of new works connected with the Second Five Year Plan.

134. Rationalized distribution of surplus stores.—Stock of surplus stores which stood at Rs. 10·19 crores on 31 March 1951 was brought down to Rs. 2·42 crores by 31 March 1958, thereby effecting a reduction of about Rs. 7·77 crores. As the figure of Rs. 10·19 crores does not include the stock declared as surplus by the Railways during 1951-2 to 1957-8, which is approximately Rs. 1·44 crores, actual liquidation of surplus stores on the Railways from 1 April 1951 to 31 March 1958 may be taken to be of the order of Rs. 9·21 crores.

Disposal of scrap—

Ferrous—

With a view to supplement the supply of steel which had generally been short of railways' requirements, the Railway Board decided to make maximum use of ferrous scrap for railway purposes. In the first instance, the Railway Board instructed the Railways to restrict the sale of ferrous scrap, except to Ordnance Factories and cast-iron sleeper manufacturers. After assessing the indigenous melting, ingotting and rolling capacity, an agreed procedure of utilisation of scrap was drawn up in consultation with the Ministry of Steel, Mines and Fuel and the Iron and Steel Controller. The important aspect of the procedure was that apart from the utilisation of certain items directly by the railways themselves, the release of scrap was made only to furnace-holders and other firms engaged in the manufacture of steel or stores for railways.

In addition, maximum vigilance was exercised by Railways at the time of survey of scrap, with a view to reclaim all serviceable and reparable items.

Non-ferrous—

Great emphasis was laid on the utilisation of non-ferrous scrap for railway purposes, owing to the great difficulty experienced in the procurement of non-ferrous metals and alloys. Under the instructions in force, the railways were required to make maximum use of non-ferrous scrap either directly or by converting them into standard usable alloys.

135. Particulars of accumulation and disposal of scrap during 1957-8

Railways	Ferrous								Non-ferrous								Miscellaneous		
	Balance as on 1-4-1957		Scrap disposed of during 1957-8				Balance as on 31-3-1958		Balance as on 1-4-1957		Scrap disposed of during 1957-8				Balance as on 31-3-1958		Balance as on 1-4-1957	Scrap disposed of during 1957-8	Balance as on 31-3-1958
			For own use		To others						For own use		To others						
	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs)	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs.)	Qty. (Tons)	Value (lakhs of Rs.)	Value (lakhs of Rs.)	Value (lakhs of Rs.)	Value (lakhs of Rs.)
Central	60,723*	55.28*	8,210	5·05	19,735**	35·74	59,248	52 91	1,481*	11·18*	2,014	14·41	167	4·88	1,820	15·37	0·82*	0·58	0·52
Eastern	23,808	15·50	16,654	14·89	7,508	8 29	28,437	18·32	1,488	7·61	1,237	4·85	247	3·92	1,825	6·52	7·47	10·87	9·03
Northern	23,257	23·10	15,425	22·47	4,278	5 93	27,690	41 07	1,583	19·14	1,558	32·17	507	10·88	1,240	20·25	4·22	6·42	4·39
North Eastern	6,400	10·64	2,350	3·27	1,693	2·38	7,443	16 25	848	15·33	976	15·78	—	—	831	14·58	1·24	1·62	1·61
Southern	26,003	27·59	13,467	18·42	9,828	13·34	27,665	38·37	1,546	10·94	2,083	17·22	63	1·60	1,880	16·09	3·20	7·89	2·47
South Eastern	12,874	9·37	4,575	5·03	2,556	4·94	16,959	13·83	843	9·72	548	13·33	45	1·41	988	15·20	9·93	2·96	6·81
Western	17,121	12·83	9,306	11·25	8,171	7·87	22,233	26·30	1,636	15·79	1,164	15·15	987	14·72	1,635	25·40	1·97	6·57	3·59
Chittaranjan Locomotive Works	3,364	3·29	2,143	1·83	3,252	1·43	9,337	8·39	241	1 24	259	1·74	—	—	405	3·15	0·42	0.28	1·04
Integral Coach Factory	208	0·07	42	0·01	479	0 17	166	0·05	6	0·03	—	—	—	—	31	0·16	0·063	0·057	0·019
TOTAL	1,73,758*	157·67*	72,172	82·22	57,500**	80·09	1,99,178	215 49	9,672*	90·98*	9 839	114 65	2,016	37·41	10,655	116·72	29·333*	37·247	29·479

* Revised figures.

** In this column major portion represents sale of scrap for utilisation for railway purposes.

SUMMARY OF OPENING AND CLOSING BALANCES OF SCRAP DURING THE YEAR 1957-8

(Quantity in thousands of tons and Value in lakhs of rupees.)

Classification of Scrap	Opening balance on 1 April 1957		Closing balance on 31 March 1958	
	Quantity	Value	Quantity	Value
Ferrous	174	157·67*	199	215·49
Non-Ferrous	10	90·98*	11	116·72
Miscellaneous	—	29·33*	—	29·48
TOTAL		277·98*		361·69

* Revised figures.

DISPOSAL OF CONDEMNED ROLLING STOCK SUCH AS LOCOMOTIVES, COACHING STOCK, WAGONS AND OTHER MISCELLANEOUS ITEMS DURING 1957-8

Types of Stock	**Balance as on 1 April 1957		Receipts during the year		Disposal during the year		Balance as on 31 March 1958	
	Quantity Nos.	Value (Rs. in thousands)	Quantity Nos.	Value (Rs. in thousands)	Quantity Nos.	Value (Rs. in thousands)	Quantity Nos.	Value (Rs. in thousands)
Locomotives	236	16,75	94	8,00	7	50	323	24,25
Coaches and coaching stock	319	5,51	282	3,53	111	2,59	490	6,45
Wagons	5,609	54,34	3,900	42,56	2,298	27,64	7,211	69,26
Miscellaneous items such as boilers, tenders, underframes, cranes, etc.	299	4,41	156	3,25	58	1,18	397	6,48
TOTAL	6,463	81,01	4,432	57,34	2,474	31,91	8,421	1,06,44

** Revised figures.

NOTE.—Value furnished in the statement is approximate as the value of some of the items has not been furnished by some railways. Stock in such cases has been evaluated at average rates.

C. SUPPLY POSITION OF VITAL ITEMS

136. Steel.—The Railway Board took over the procurement, by import, of steel track materials for the railways from the Iron and Steel Controller with effect from 1 April 1957. Following a global enquiry issued at the end of April 1957, a Steel Purchasing Mission consisting of four members was sent abroad to contact the producers, to scrutinise the quotations received in response to the enquiry and to place orders to cover the outstanding requirements and also those for 1957-8 and half of 1958-9. In addition to the steel track materials, the Mission, at the request of the Ministry of Steel, Mines and Fuel arranged procurement of pig iron required for the manufacture of cast-iron sleepers as also mild steel plates required for wagon-building.

The details of the quantity of iron and steel ordered by the Mission and the quantity of steel received upto the end of March 1958 are as follows:

(Figures in lakhs tons)

	Total quantity ordered	Quantity received up to 31 March 1958
(a) Non-indentifiable	0·20	0·20
(b) Identifiable	3·80	0·54
(c) P g Iron	1·30	1·11
TOTAL	5·30	1·85

The value of the orders placed is Rs. 36 crores approximately. The shipments against these contracts commenced in August 1957 and are expected to be completed by December 1958 in respect of all the orders placed except one, in which case deliveries may extend up to March 1959.

As a result of this special action taken by the Railway Board, the supply position of steel track materials is expected to improve considerably during the next year.

The overall supply position of iron and steel to the Railways against their requirements for the year was as follows:

	Quantity indented (In lakh tons)	Quantity supplied (In lakh tons)		
		Indigenous	Imported	Total
(a) Non-identifiable	4·81	2·24	1·43	3·67
(b) Identifiable	4·63	0·74	2·74	3·48
(c) Pig Iron	1·99	0·35	1·78	2·13*
TOTAL	11·43			9·28

* Includes backlog.

There has been an improvement in the supply during 1957-8; nevertheless, the supply position of non-identifiable steel, particularly, structurals and plates continued to be unsatisfactory.

137. Timber—other than wooden sleepers.—During the year under review, the supply of timber (other than wooden sleepers) has been mainly from the State Forest Departments, the trade and the State Timber Board, Burma. While the timber purchased from the trade was on the tender system, the timber purchased from the other two sources was on Government-to-Government basis. Since indigenous teak was in short supply, arrangements were made to import Burma Teak from State Timber Board, Burma, by sending a Purchase Mission there. Nearly 47 per cent of the total requirements of timber was covered on State Forest Departments, 25 per cent on trade and 28 per cent on State Timber Board, Burma. Though the supply position considerably improved, difficulties about movement were still experienced owing to shortage of suitable wagons.

The table below shows the quantity indented on the Directorate General of Supplies and Disposals and received by the Railways after inspection during 1957-8.

Period	Demand indented (In tons)	Quantity inspected/received (In tons)
2nd Qr/57	50,769	14,261*
3rd Qr/57	6,101	13,206*
4th Qr/57	—	15,405*
1st Qr/58	3,200	16,578*
TOTAL	60,070	59,450

* Includes outstandings from the 2nd Qr/57 and earlier periods

138. Timber—Wooden sleeper purchase organization.—The General Managers of Indian Railways were authorized to act on behalf of the Railway Board in planning the maximum procurement of wooden sleepers from their respective zones and negotiating with the State Governments as shown below:

Railway	States
Northern	Punjab (1), Himachal Pradesh, Jammu and Kashmir and Rajasthan.
North Eastern	Uttar Pradesh and Nepal.
Northeast Frontier	Assam, Sikkim, Bhutan, Northeast Frontier Agency, Manipur and Tripura.
South Eastern	West Bengal, Bihar, Orissa, Madhya Pradesh and Balharshah Forests in the Bombay State.
Southern	Madras, Mysore, Kerala, Andhra Pradesh and Andaman and Nicobar islands.
Western	Bombay except Balharshah Forests.

139. Wooden, cast-iron and steel sleepers.—During the year ending 31 March 1958 the following wooden, cast iron, and steel sleepers were purchased by the Railways:

PURCHASE OF SLEEPERS—WOODEN

Railway		Broad (Nos.)	Metre (Nos.)	Narrow (Nos.)	Specials (cft.)
Central	(Indigenous)	74,706	1,516	9,561	342,035
Eastern	,,	87,286	—	—	132,766
Northern	,,	261,816	36,472	902	218,475
North Eastern	,,	877	496,637	6,000	126,000
Southern	,,	187,966	415,726	6,218	197,520
South Eastern	,,	86,179	—	66,648	92,058
Western	,,	54,190	195,019	24,005	250,250
	(Imported)	5,781	78,188	31,782	—
TOTAL	(Indigenous)	753,020	1,145,370	113,334	1,359,104
	(Imported)	5,781	78,188	31,782	—
	GRAND TOTAL	758,801	1,223,558	145,116	1,359,104

PURCHASE OF SLEEPERS—CAST IRON

Railway		Broad (Nos.)	Metre (Nos.)	Total (Nos.)
Central	(Indigenous)	304,478	—	304,478
Eastern	,,	128,989	—	128,989
Northern	,,	271,433	50,857	322,290
North Eastern	,,	—	—	—
Southern	,,	92,806	79,304	172,110
South Eastern	,,	498,086	—	498,086
Western	,,	174,461	145	174,606
	TOTAL	1,470,253	130,306	1,600,559

PURCHASE OF SLEEPERS—STEEL

Railway	Broad (Nos.)	Metre (Nos.)	Specials (sets)
Central—			
(Indigenous)	—	28,000	—
(Imported)	221,309	90,964	—
Eastern—			
(Indigenous)	24,270	—	—
(Imported)	—	—	—
Northern—			
(Indigenous)	—	48,979	—
(Imported)	28,079	58,157	—
North Eastern—			
(Indigenous)	—	50,150	—
(Imported)	—	70,271	—
Southern—			
(Indigenous)	—	46,920	100
(Imported)	27,090	158,970	—
South Eastern—			
(Indigenous)	1,24,050	—	—
(Imported)	25,648	—	—
Western—			
(Indigenous)	—	114,100	145
(Imported)	71,187	683,270	—
TOTAL—			
(Indigenous)*	124,050	288,149	245
(Imported)	397,583	1,061,632	—
GRAND TOTAL	521,633	1,349,781	245

* Fabricated in the country mostly from imported sleeper bars.

The average price of first class wooden sleepers on various Railways purchased from State Forest Departments and private contractors was as under:

Railway	Broad F.O.R. Per sleeper	Metre F.O.R. Per Sleeper	Narrow F.O.R. Per sleeper
	Rs. nP.	Rs. nP.	Rs. nP.
Northern—			
Private Contractors	—	—	—
State Forests—			
Deodar	19 00	9 00	5 50
Kail	14 50	8 75	—
Chir	12 50	6 00	—
Fir	12 00	—	—
North Eastern—			
Private Contractors	—	9 00	6 00
State Forests—			
Assam	19 00	9 00	6 00
Uttar Pradesh	—	8 00	—
Southern—			
Private Contractors	20 00	9 50	5 75
State Forests—			
Andhra	20 00	9 50	6 19
Kerala	20 00	9 62	5 62
Madras	20 00	9 50	5 75
Mysore	20 00	9 50	6 31
South Eastern—			
Private Contractors	19 89	—	5 09
Western—	19 82	—	5 41
Private Contractor	18 00	8 50	—

At Dhilwan Creosoting Plant on the Northern Railway, 211,901 Broad gauge, 285 Metre gauge, and 619 Narrow gauge sleepers were treated during the year with a mixture of 40 per cent creosote and 60 per cent liquid fuel oil. *Chir* sleepers were treated by the Rueping process and others by the Full-cell process. The details are given below:

SLEEPERS TREATED IN CREOSOTING PLANT AT DHILWAN DURING 1957-8

	Chir			Deodar		Kail	
	Broad	Metre	Narrow	Broad	Narrow	Broad	Narrow
No. of sleepers treated	146,869	285	105	42,760	514	9,504	12,768
Cost of treatment per sleeper (including freight) Rs.	3·80	1·79	1·72	2·79	1·05	3·36	2·70
Average absorption of mixture per c.ft. in lbs.	4·713	4·572	5·052	3·294	3·113	4·852	4·890

At the Naharkatiya Creosoting Plant on the Northeast Frontier Railway, 63,660 Broad gauge and 86,267 Metre gauge sleepers of *Hollong* and 21 other species were treated during the year with creosote and liquid fuel oil in 40 : 60 proportion by the Lowry Empty Cell process. The average absorption was 5·7 lbs. per cft. and average cost of treatment per sleeper was Rs. 5·62 per Broad gauge and Rs. 2·70 per Metre gauge sleeper.

At the Creosoting Plant at Clutterbuckganj on the North Eastern Railway, 118,430 Broad gauge, 182,677 Metre gauge, 15,029 Narrow gauge, 7,132 crossings and 7,370 block sleepers of *Chir* and 15 other species were treated during the year with creosote and liquid fuel oil in 40 : 60 proportion by the

Lowry Empty Cell process from 1 April 1957 to 11 September 1957 and Rueping process from 12 September 1957 to 31 March 1958. The average absorption was 4·75 lbs. per cft. and the cost of treatment per sleeper was Rs. 4·44 per Broad gauge, Rs. 2·13 per Metre gauge and Rs. 1·55 per Narrow gauge sleeper approximately.

The Creosoting Plant at Olavakot on the Southern Railway was brought into operation only from 12 September 1957, initially with one shift per day. Two shifts were introduced from 17 March 1958. During the year under review, 59,928 Broad gauge and 68,458 Metre gauge sleepers of *Poon* and 20 other species were treated at this plant with a mixture of creosote and liquid fuel oil in 40 : 60 proportion. The average absorption was from 2½ to 7 lbs. per cft. and the cost of treatment was Rs. 4·03 per Broad gauge and Rs. 1·94 per Metre gauge sleeper.

The relative position of the various kinds of sleepers may be seen from the following percentages based on the total number of sleepers in track (excluding Sidings) on Government Railways:

RELATIVE POSITION OF VARIOUS KINDS OF SLEEPERS ON 31 MARCH 1958

Gauge	Wooden Per cent	Cast Iron Per cent	Steel Per cent
Broad	18·63	53·00	28·37
Metre	65·06	6·59	28·35
Narrow	71·59	1·27	27·14

140. Cement.—On receipt of the quarterly requirements of cement from all the Railways, a consolidated demand is placed on the Ministry of Commerce and Industry who make allotment to all indentors based on the total demand for the quarter and the relative output of all the cement factories.

During the year under review, the total allotment of cement made to the Railways by the Ministry of Commerce and Industry was 570,000 tons against a total demand of 832,000 tons representing 68·5 per cent of the demand.

Compared to the previous year the total allotment was 68,400 tons more and the percentage allotment against the demand has risen from 60 to 68·5 per cent.

141. Other vital stores.—

Points and crossings.—The capacity in the country had been booked by the Director General, Supplies and Disposals against long term arrangements by placing running contracts, and supplies continued to flow to the Railways from indigenous sources. During the year, 6,800 equated sets were received by the Railways from the indigenous sources. In addition about 4,000 equated sets were received from imports against 13,400 ordered during 1956-7 by the Director General, Supplies and Disposals leaving a balance of 9,400 sets on imports. It is expected that no further orders on imports would be necessary during the rest of the Plan period.

Fish bolts and nuts, tie bars, keys, cotters loose jaws, bearing plates, dog spikes, round spikes, etc.—Long term running contracts were placed by the Director General, Supplies and Disposals for these fittings. The supply, in general, remained fairly satisfactory except for tie bars, for which the supply was inadequate, the main reason being inadequate receipts of steel, viz., billets and flats.

Signalling and interlocking items.—Although indigenous capacity has been developed in the country for the manufacture of mechanical signalling items, the bulk of the electrical signalling items still continues to be imported. In spite of adequate indigenous capacity for the manufacture of mechanical signalling items, the supplies to railways were inadequate due to shortage of raw materials, namely, steel and pig iron. With the improved supply of pig iron during the latter part of the year the supply of cast iron items improved.

Wheels, axles and tyres.—The supply position of Carriage and Wagon axles and tyres was satisfactory due to receipt of considerable quantity from imports. The locomotive tyres were, however, in short supply.

C. I. Pipes and fittings.—These were in short supply. However, special efforts were made to obtain priority for supply to railways.

Paints.—Supply position, in general, has been satisfactory during the year.

Paint brushes.—There is still a general complaint from the railways that the quality of paint brushes supplied by different firms is not of the requisite standard. This is engaging the attention of the Director General, Supplies and Disposals and the Government Testing House, Alipore.

Creosote.—As against the railways' annual requirements of nearly 4,500 tons, the indigenous availability is only about 3,000 to 3,500 tons. The shortfall was met by import.

Boiler Tubes.—The requirements of boiler tubes of the railways were arranged entirely by import. Due to non-availability of skelp of the required specification, Messrs. Indian Tube Co., Jamshedpur have not yet commenced supply of boiler tubes. They are expected to go into production from next year.

Cables.—The shortfall in the supply of cables, particularly, signalling cables still continues. The production of Messrs. Indian Cable Co., Jamshedpur, being inadequate, imports had to be resorted to a certain extent.

Train lighting batteries.—Indigenous capacity has been expanded to meet the full requirements of the railways. During the latter part of the year, adequate monthly supplies were made by indigenous producers.

Blank card tickets.—The position of blank card tickets improved considerably during the year, as Messrs. Ashoka Marketting Ltd., Dalmianagar, who were the main producers of this item, were able to supply full requirements of card boards against the Director General, Supplies and Disposals' contracts. Further two sources, *viz.*, Messrs. Gujrat Paper Mills and Messrs. Paper and Pulp Conversions, Poona, have also been developed for the manufacture of card board for tickets.

Fire bricks.—The Director General, Supplies and Disposals have entered into rate contracts for common sizes used on various railways with five different firms. Due to shortage of capacity in the country, supplies were delayed, but practically all the old firms have increased their capacity in the latter part of the year to cope with the total requirements. New firms are also coming in the field.

Electrodes.—The supply position, in general, has been satisfactory.

142. Development of railway stores.—Briefly, the activities of the development cell are as under :

Implementation of the Railway Equipment Committee's recommendations.—Out of the 45 recommendations made by the Railway Equipment Committee action has been finalised on 41 recommendations, the other four being still under consideration.

Setting up of the Equipment Advisory Committee.—The Railway Equipment Committee recommended in their report the setting up of the Railway Equipment Advisory Committees—one at the centre and four in the Regions at Delhi, Calcutta, Madras, and Bombay. These committees have since been set up.

Wagon and underframe manufacturing capacity.—There has been substantial progress in the output of wagons and coaching underframes from established builders. The present installed capacity is about 20,000 wagons. In order to meet the increased requirements by the end of Second Five Year Plan, educational orders have already been placed on ten new firms.

At the end of the First Plan there was only one firm who used to supply 200 Metre gauge underframes annually and the requirements of the Railways were met by resorting to imports. Sufficient indigenous capacity has now been located from amongst the established wagon builders.

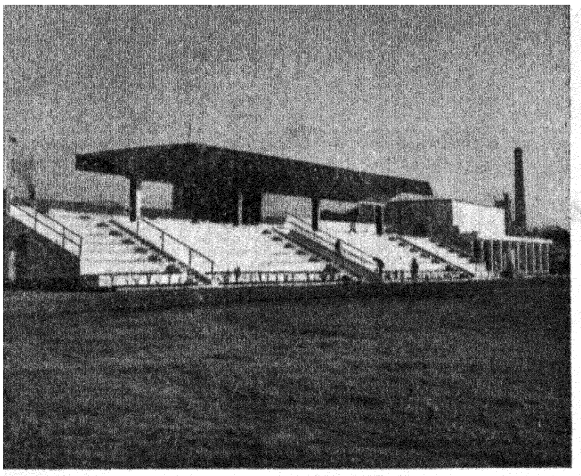
Locomotive duplicates.—Indigenous capacity has been located for seven items of pressure castings, viz., gauge column cocks, everlasting blow off cock, injector starting valve, blow through cock, injectors, safety valves and ejectors

and railways have been advised not to import any of these in future. Capacity has also been located for both steam pressure gauges and vacuum gauges and bulk orders have been placed by Chittaranjan Locomotive Works on the National Instrument Factory.

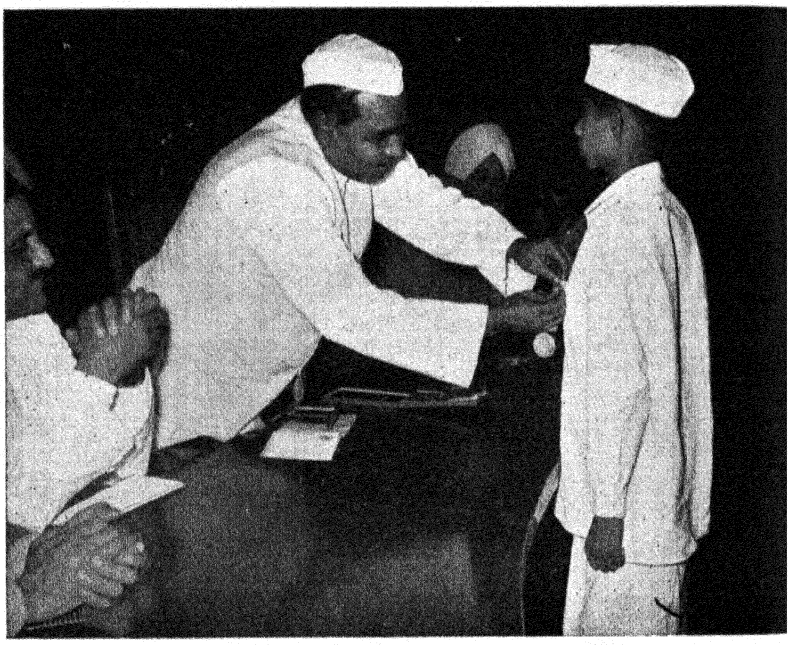
Signalling equipment.—There are two types of signalling equipment—mechanical and electrical signalling. As regards mechanical signalling equipment, it is now largely made in the country and recent efforts made have revealed that the industry has almost doubled the output in recent months. As regards electrical and power signalling equipment which consists of colour light signals, point indicators, a number of relays, circuit controllers, motor operated points, etc., very few of these items are at present manufactured in the country and even these are made in small quantities.

Plans have now been worked out for simultaneous development of electrical signalling equipment both in the private and public sector. One Railway workshop in the course of expansion will include capacity to make power signalling equipment. Lack of drawings and designs necessitate foreign collaboration. If these plans bear fruit, this industry can be established in a few years.

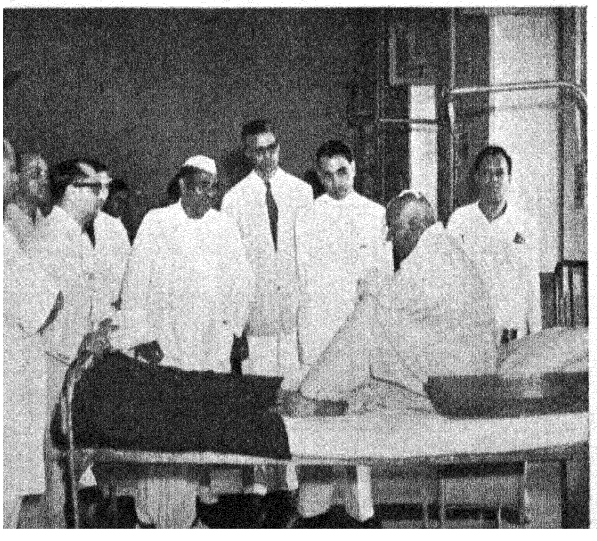
Miscellaneous items.—Considerable developmental action is being taken to foster manufacture of miscellaneous items of equipment in the country. In the field of track materials production of rails has been planned in the new steel plants. Enhanced capacity for the manufacture of cast iron sleepers has been established while increased quantities of sleepers are expected from several units. In the field of train lighting equipment, greatly augmented output of train lighting dynamos, its allied switchgear and train lighting batteries is being obtained from indigenous sources consequent on the encouragement given to the industry. Head-lights of locomotives are also now indigenously manufactured.



A VIEW OF THE NEWLY CONSTRUCTED SPORTS STADIUM AT MAHALAXMI—WESTERN RAILWAY



THE MINISTER FOR RAILWAYS GIVING AWARD TO THE SON OF LATE SHRI JUDHA RAM, GATEMAN DURING THE RAILWAY WEEK—NORTHERN RAILWAY



RAILWAY MINISTER SHRI JAGJIWAN RAM VISITING HOSPITAL, BYCULLA—CENTRAL RAILWAY

CHAPTER VIII

STAFF

143. General.—With the increase in demand for staff arising out of the Second Five Year Plan, the Railways experienced difficulty in finding technical personnel to meet their requirements, a part of which had in consequence to be met by re-employment of superannuated staff. The total number of staff on re-employment at the end of the year was about 3,600.

Class IV employees governed by Liberalized Leave Rules have been brought on par with Class I, II and III Railway staff in the matter of earning Leave.

An *ad hoc* increase of Rs. 5 in the Dearness Allowance was sanctioned to Railway staff drawing a basic salary upto Rs. 300 per mensem with effect from 1 July 1957.

A Pension scheme, as for Civil Services of the Government, was introduced on the Railways, in substitution of the existing retirement benefits under the State Railway Provident Fund. In the case of Class IV employees, an additional Gratuity of Rs. 200 per year of qualifying service in excess of 30 years, subject to a maximum of Rs. 1,000, has also been allowed.

It was decided that the total Railway service rendered, including service on re-employment on Railways in continuation of active service, or even subsequent to final retirement and re-employment, shall be taken into account for the purpose of eligibility of issue of post-retirement passes to Railway servants.

Staff welfare organisation on the Railways continued to function satisfactorily. In the field of sport, the year brought many distinctions to Railwaymen, including the National Championship in Hockey for the second successive year.

144. Number of Staff.—The total number of employees permanent and temporary, on all the Railways (including Non-Government Railways) and in the office of the Railway Board and other offices subordinate thereto, excluding staff employed on construction at the end of 1957-8 was 1,108,529 as compared with 1,056,779 at the end of 1956-7.

As compared with the previous year, there has been an increase in the total number of staff employed on the Government Railways during 1957-8 of 52,202 on the open line and 2,132 on construction.

145. Cost of Staff.—The statement on the next page shows the number and cost of all staff, Classes I, II, III and IV, permanent and temporary, open line and construction, employed on Government Railways during 1956-7 and 1957-8. The labour employed by contractors is not included.

The total cost of staff including those on loan from the Indian Audit and Accounts Service, increased by Rs. 16,62,20,000 during the year as compared with the figure for the previous year. The increase in cost is chiefly due to the increase in the number of staff, an *ad hoc* increase of Rs. 5 in the rate of dearness allowance and partly due to the redistribution of posts in the different grades with retrospective effect, etc.

NUMBER AND COST OF STAFF ON GOVERNMENT RAILWAYS DURING 1956-7 AND 1957-8

Railway	Year	NUMBER OF STAFF ON 31 MARCH (*In units*)							†COST OF STAFF DURING THE YEAR ENDING 31 MARCH (*In thousands of Rupees*)			
		OPEN LINE			CONSTRUCTION			Staff on loan from the Indian Audit and Accounts Service				
		Classes I & II	Classes III & IV	Total	Classes I & II	Classes III & IV	Total		Classes I & II	Classes III & IV	Total	Total including staff on loan from the Indian Audit and Accounts Service
Central	1957	452	181,014	181,466	39	1,269	1,308	—	61,51	27,05,72	27,67,23	27,67,23
	1958	**467**	**190,251**	**190,718**	**35**	**1,588**	**1,623**	—	**62,39**	**29,79,24**	**30,41,63**	**30,41,63**
Eastern	1957	430	158,912	159,342	9	118	127	1	48,60	24,22,43	24,71,03	24,71,37
	1958	**470**	**167,722**	**168,192**	**14**	**259**	**273**	—	**54,67**	**26,80,52**	**27,35,19**	**27,35,19**
Northern	1957	498	160,424	160,922	4	115	119	—	49,25	23,03,18	23,52,43	23,52,43
	1958	**529**	**169,313**	**169,842**	**2**	**113**	**115**	—	**52,68**	**25,21,34**	**25,74,02**	**25,74,02**
North Eastern	1957	407	126,461	126,868	—	—	—	1	40,61	17,70,69	18,11,30	18,11,37
	1958	**469**	**135,095**	**135,564**	**18**	**339**	**357**	**1**	**44,06**	**19,44,65**	**19,88,71**	**19,88,74**
Southern	1957	414	157,006	157,420	19	1,096	1,115	1	45,90	22,29,66	22,75,56	22,75,65
	1958	**477**	**158,510**	**158,987**	**16**	**1,322**	**1,338**	**1**	**52,28**	**24,59,31**	**25,11,59**	**25,11,74**
South Eastern	1957	426	114,430	114,856	78	1,182	1,260	—	41,19	16,56,13	16,97,32	16,97,32
	1958	**453**	**117,827**	**118,280**	**101**	**2,301**	**2,402**	**1**	**54,10**	**18,03,81**	**18,57,91**	**18,58,00**
Western	1957	468	135,730	136,198	3	588	591	—	44,59	19,24,76	19,69,35	19,69,35
	1958	**488**	**144,038**	**144,526**	**4**	**664**	**668**	—	**50,18**	**21,82,27**	**22,32,45**	**22,32,45**
Chittaranjan Locomotive Works	1957	46	7,453	7,499	—	—	—	—	5,25	1,08,17	1,13,42	1,13,42
	1958	**47**	**7,825**	**7,872**	—	—	—	—	**5,41**	**1,25,01**	**1,30,42**	**1,30,42**
Calcutta Electrification Project	1957	—	—	—	22	442	464	—	2,29	8,36	10,65	10,65
	1958	—	—	—	**21**	**478**	**499**	—	**3,29**	**9,87**	**13,16**	**13,16**
Integral Coach Factory	1957	36	2,465	2,501	4	37	41	—	4,28	34,47	38,75	38,75
	1958	**41**	**4,661**	**4,702**	**6**	**71**	**77**	—	**5,65**	**60,72**	**66,37**	**66,37**
Ganga Bridge Project	1957	—	—	—	29	1,163	1,192	—	3,68	19,63	23,31	23,31
	1958	—	—	—	**26**	**971**	**997**	—	**3,07**	**18,89**	**21,96**	**21,96**
Railway Board and other Railway offices	1957	264	3,135	3,399	—	—	—	1	35,81	65,06	1,00,87	1,01,44
	1958	**325**	**3,665**	**3,990**	—	—	—	**1**	**47,08**	**73,14**	**1,20,22**	**1,20,81**
Total Government Railways	1957*	3,441	1,047,030	1,050,471	207	6,010	6,217	4	3,82,96	1,52,48,26	1,56,31,22	1,56,32,29
	1958	**3,766**	**1,098,907**	**1,102,673**	**213**	**8,108**	**8,349**	**4**	**4,34,86**	**1,68,58,77**	**1,72,93,63**	**1,72,94,49**

* Represents revised figures for 1957 due to changes made by the Railway Administrations in the figures published last year.

† The figures of cost of all Railways represent pay, allowances, passages, provident fund contributions, gratuities and the grainshop concessions.

146. Direct recruitment to Gazetted Railway Services.—Two hundred and forty eight appointments, temporary and permanent were made in the Gazetted Railway Services by direct recruitment during the year. The details by department are given below:

Permanent appointments

	Number.
Civil Engineering	18
Signal Engineering	8
Electrical Engineering	11
Transportation (Traffic) and Commercial	40
Transportation (Power) and Mechanical Engineering	31
Accounts	23
Stores	5
Medical	7
Others	2

Temporary appointments

Civil Engineering	11
Signal Engineering	18
Electrical Engineering	4
Transportation (Traffic) and Commercial	27
Transportation (Power) and Mechanical Engineering	3
Accounts	10
Stores	7
Personnel	23
TOTAL	248

147. Promotion to the Class I Railway Services.—Thirty-two permanent promotions were made during the year from Class II and Class III Services to Class I Service. These include the *ex*-State Railway officers promoted against the $16\frac{2}{3}$ per cent special quota reserved for such officers.

148. Railway Staff College, Baroda.—To develop the increased training facilities required in the Second Five Year Plan, the capacity of the College was increased, as already stated in the last year's report, from 30 to 110, residential accommodation being provided in hutments. Proper hostel accommodation and residential accommodation for the Instructors is now being planned.

During the year, 23 sessions were held for training the officers, of which 10 were for probationary officers and 13 for temporary officers. A total of 543 officers went through the College. Three Accounts Officers and one Stores Officer of the Burma Government Railway also received training in regular or specially arranged courses.

As the total capacity of the College had to be utilized for the training of junior and newly recruited officers, special lectures for senior officers in the shape of refresher courses could not be arranged during the year.

The training equipment in the College was added to by a complete unit of Automatic Train Equipment, and a model of semi-through girder bridge of 105 feet span erected on the Western Railway on the Fatehabad Nullah. Various types of sleepers and fittings have also been laid in the demonstration yard and other track materials and fittings have been collected to form a museum of the evolution of track.

At the end of the year, the Library had 8,015 books, 1,248 books having been added during the year. Six more instructional films on railway matters were acquired during the year and the film library has now a stock of 36 films.

42 Officers from different railways gave lectures on subjects in which these officers had special experience.

Excursions were arranged to show the trainees practical aspects of railway working, like new railway constructions re-modelling works and operation of yards and loco sheds and commercial and accounts working.

149. Railway Service Commissions.—The Railway Service Commissions with headquarters at Allahabad, Bombay, Calcutta and Madras continued to conduct recruitment of Class III staff for the Indian Railways during the year under review. Some of the important statistics relating to the recruitment of staff are given below:

	Non-technical categories	Technical categories
(*a*) Number indented by Railways	32,757	5,455
(*b*) Number of applications received	6,30,399	37,209
(*c*) Number called for test interview	1,47,392	12,475
(*d*) Number selected	33,768	3,852

The Commissions experienced a general dearth of qualified technical staff, particularly recruits with degrees and diplomas in Engineering (Mechanical, Civil and Electrical). For senior higher grade supervisory posts in Railway workshops and drawing offices of the Railways, engineering graduates and for lower grades, diploma holders with appropriate practical experience were difficult to find. For the specialized categories such as marine staff, nursing staff and doctors, there was insufficient response.

An approximate assessment of the Class III technical staff required by the Indian Railways during 1958-9 which is expected to be available either by direct recruitment or training of apprentices is as follows:

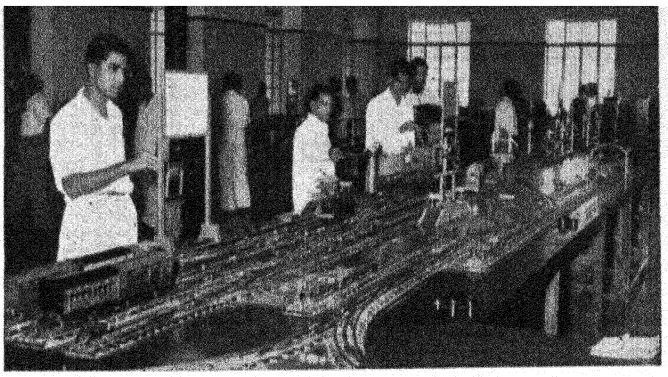
	Civil Engineering	Mechanical Engineering	Electrical Engineering
Degree holders	57	79	131
Diploma holders	475	577	596

The income of the Railway Service Commissions by the sale of application forms and the expenditure incurred during 1957-8 were:

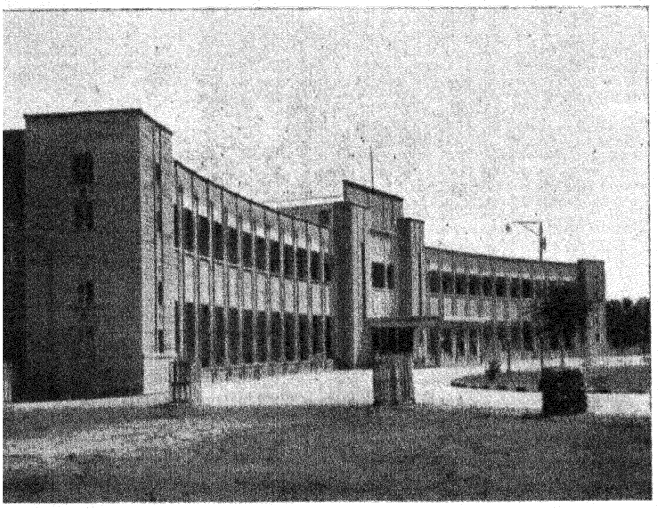
(Figures in thousands)

	Income	Expenditure
	Rs.	Rs.
Railway Service Commission, Allahabad	2,51	2,68
Railway Service Commission, Bombay	1,84	2,78
Railway Service Commission, Calcutta	1,55	4,14
Railway Service Commission, Madras	1,18	2,39
Total	7,08	11,99

150. Recruitment of Scheduled Castes, Scheduled Tribes and Anglo-Indians in non-Gazetted Railway Services.—The number of posts available



TRAIN WORKING INSTRUCTIONS IN THE MODEL ROOM—
STAFF COLLEGE, BARODA



A VIEW OF THE TRAINING SCHOOL FOR THE
STAFF AT UDAIPUR—WESTERN RAILWAY

A VIEW OF THE NEWLY CONSTRUCTED
TECHNICAL TRAINING SCHOOL—INTEGRAL
COACH FACTORY



to Scheduled Castes, Scheduled Tribes and Anglo-Indians and the recruitment made to these categories during the year are shown below:

Railway Service Commission	Number of posts reserved			Number of candidates selected		
	Scheduled Castes	Scheduled Tribes	Anglo-Indians	Scheduled Castes	Scheduled Tribes	Anglo-Indians
Allahabad	1,587	240	490	948	22	11
Bombay	1,186	744	660	1,964	166	70
Calcutta	1,638	610	359	2,372	182	66
Madras	663	75	280	762	91	163
TOTAL	5,074	1,669	1,789	6,046	461	310

In comparison with the last year, the selection of Scheduled Castes, Scheduled Tribes and Anglo-Indians has shown improvement. Although the number of Scheduled Castes candidates selected except by one Commission has exceeded the number of posts reserved for them, the response from the Scheduled Tribes and Anglo-Indians has not been up to expectations in spite of efforts made by the Commissions who, in addition to advertisements in important newspapers, continued to send copies of the employment notices to the Employment Exchanges concerned and also to recognized organizations representative of these communities.

With a view to stepping up recruitment of candidates belonging to Scheduled Castes and Scheduled Tribes, stress was laid on the need for providing additional training and coaching to enable those not quite up to the expected level to come up to the level of other candidates recruited with them. The Commissions were also advised to hold, where necessary, selections exclusively for candidates belonging to these communities.

In order to make up deficiencies of Scheduled Castes and Scheduled Tribes, in the services in which they have not been recruited to the extent of the quota reserved for them, special powers have also been vested in the General Managers to select candidates from these communities for appointment to Class III railway service on their own responsibility without reference to the Service Commissions. The special powers have also since been extended to the recruitment of Anglo-Indians.

151. Training Schools on Railways.—There are now 50 training schools on Railways. Some of them are Traffic Training Schools where recruits are trained in the duties of station masters, signallers, guards, booking, parcel and goods clerks, etc. In other schools, loco running staff and permanent way staff are trained. Separate schools also exist for training the staff of the Railway Protection Force. Refresher and promotion courses for staff already in service are also provided in a large number of these schools.

The training facilities at some of the schools were expanded and technical Institutes/Schools for the Mechanical and Electrical Apprentices were established at Lucknow, Ajmer and Bangalore City. Additional hostel accommodation has also been provided.

The three Technical Training Centres one each at Shahjahanpur, Mhow and Madhopur continued to train Apprentice Assistant Inspectors of Works, Draftsmen and works mistries.

An all India Signal and Tele-communication school has been set up at Secunderabad for training Signal Inspectors. Temporary arrangements have also been made for a Fuel training course at Jamalpur pending the setting up of a permanent school at Dhanbad.

Suitable arrangements have also been made by the Railway Administrations to provide initial training, refresher and promotion courses for certain categories of Class IV staff.

152. Technical training facilities for Apprentice Mechanics, Trade Apprentices and Apprentice Train Examiners.—The Railways continued to maintain Training Schools for imparting theoretical training to their apprentices in the mechanical, electrical and signal and tele-communication departments and to the apprentice train examiners in the mechanical engineering department. Practical training facilities are available in the workshops.

Apprentice Mechanics are selected from among candidates who have passed the Matriculation Examination or its equivalent. Diploma holders in mechanical and electrical engineering from recognized institutions are also recruited for a condensed course of training. A limited number of skilled workmen who are Matriculates and have completed a full trade apprenticeship are also taken for further training as apprentice mechanics. The training of apprentice mechanics is designed to get trained personnel for the supervisory posts in the Railway workshops.

Trade apprentices are selected for training in various trades such as fitting, carpentry, blacksmithy, moulding, machining, turning, millwright, boilermaking, tin and coppersmithy, welding, pattern making, painting, polishing, trimming and electrical wiring, etc. The candidates are required to have passed the VIII standard. Such of the artisans as have successfully completed a full course of basic training for a period of 1½ years in one of the Government Technical Training Centres are also recruited for further training as trade apprentices for a reduced period of training. A number of basic training centres have been opened in the workshops and running sheds to meet the increased demand of trained men during the Second Five Year Plan. This training scheme is designed to get trained workmen for skilled categories of staff in the workshops.

The Apprentice Train Examiners are selected from among candidates who have passed the Matriculation Examination or its equivalent. The training is designed to obtain trained personnel for supervisory posts in the train examining branch of the Mechanical Department.

A statement showing the number of apprentice mechanics, trade apprentices and apprentice train examiners recruited and trained during the year 1957-8 is given on the next page.

153. Relations with Labour.—The relations between the Raiway Administrations and the labour were generally cordial.

The working committee of the National Federation of Indian Railwaymen met four times during the period under review, *i.e.*, on 14 and 15 April 1957 at Ahmedabad, on 7 and 8 May 1957 at Mughalsarai, on 23 September 1957 at New Delhi and on 13 to 15 December 1957 at Jubbulpore. At these meetings, resolutions covering a number of subjects including unity among workers were passed by the Federation.

154. Permanent Negotiating Machinery for settlement of disputes.—The Permanent Negotiating Machinery set up on Railways in 1952, with a view to maintaining contact with labour and resolving disputes and differences which may arise between them and the Administration, continued to function satisfactorily during the period under review. On the eight zonal Railways, forty seven meetings were held at the Headquarters level and one thousand and seventy meetings at District/Divisional levels. The discussions covered a wide range of subjects.

At the second tier of the Machinery, there were two periodical meetings between the Railway Board and the National Federation of Indian Railwaymen —one in July 1957 and the other in February 1958 at which a number of subjects were discussed. In addition, there was also another meeting with the National Federation of Indian Railwaymen to discuss with them the question of the introduction of the Pension scheme on the Railways.

At the third tier, the sittings of the *ad hoc* Tribunal were resumed with a view to deciding the issues under two terms of reference which were pending before it and which were not settled in the negotiations in July 1955. In the first instance, negotiations were carried on between the Railway Board and the Federation on the issues numbering over three hundred falling under the

STATEMENT SHOWING THE NUMBER OF APPRENTICE MECHANICS, TRADE APPRENTICES AND APPRENTICE TRAIN EXAMINERS RECRUITED AND TRAINED DURING THE YEAR 1957-8

Railway	Theoretical/ Practical training	Apprentice Mechanics			Trade Apprentices			Apprentice Train Examiners		
		Number recruited during the year	Number completed training during the year	Number under training on 31-3-58	Number recruited during the year	Number completed training during the year	Number under training on 31-3-58	Number recruited during the year	Number completed training during the year	Number under training on 31-3-58
Central	Theoretical and Practical.	64	32	160	457	13	1,402	200	107	93
Eastern	Do.	56	6	414	328	245	1,266	—	20	18
Northern	Do.	60	7	191	808	57	1,480	45	25	22
North Eastern	Do.	34	12	70	155	71	509	35	22	57
Southern	Do.	75	43	229	295	32	758	31	14	100
South Eastern	Do.	49	14	160	68	328	972	41	11	94
Western	Do.	43	15	198	369	214	1,751	199	39	240
Chittaranjan Locomotive Works	Do.	33	14	51	226	71	432	—	—	—
Integral Coach Factory	Do.	23	—	40	615	371	845	—	—	—
Locomotive Component Works	Do.	20	—	19	—	—	—	—	—	—
TOTAL		457	143	1,532	3,316	1,402	9,415	551	238	624

two terms of reference and agreements were arrived at on a number of them. Orders were also issued on most of those agreements for implementation by the Railways after placing the matter before Tribunal for communicating the agreed decisions. The issues on which agreement could not be arrived at by discussion were referred to the Tribunal, hearings before whom had not concluded at the close of the year under review.

155. Working of Staff Councils, Staff Committees and Labour Advisory Committees.—The deliberations of these bodies were useful in promoting better understanding between the Administration and the staff.

The Labour Advisory Committee through which representatives of labour are associated in the formulation of welfare schemes, worked satisfactorily.

The number of Councils and Committees and the number of meetings held by these Councils and Committees during the year are given in the statement below:

Railway	Staff Councils/Staff Committees		Labour Advisory Committees	
	Number of Committees	Number of meetings held	Number of Committees	Number of meetings held
Central	11	40	1	1
Eastern	21	50	1	—
Northern	52	109	1	2
North Eastern	16	34	1	1
Southern	20	37	1	1
South Eastern	*	*	1	—
Western	27	99	1	1
Chittaranjan Locomotive Works	1	1	@	@
Integral Coach Factory	1	3	†	†

*Staff Councils were not functioning on the South Eastern Railway.

@There is no Labour Advisory Committee in Chittaranjan Locomotive Works but there is a Works Committee which held one meeting during the year.

†No Labour Advisory Committee exists on the Integral Coach Factory.

156. LabourWelfare—

(i) *Railway Schools.*—In consultation with the National Federation of Indian Railwaymen, a survey of facilities for primary education in Railway colonies was undertaken by the Railway Administrations to ascertain where such facilities were not adequate. The proposals submitted by the Railway Administrations in this regard were under examination during the year.

On the formation of the Northeast Frontier Railway, from 15 January 1958, the Railway Board sanctioned the taking over of two non-Railway High Schools by that Railway, one each at Alipurduar and Pandu.

During the year, two Railway Schools were upgraded to the High School standard, one at Bilaspur on the South Eastern Railway and the other at Gangapur City on the Western Railway. Sanction was also conveyed to the conversion of three High Schools—one at Asansol on the Eastern Railway, the other at Golden Rock on the Southern Railway and the third at Khargpur on the South Eastern Railway—into multi-purpose schools.

The total number of schools functioning on the Railways, the number of pupils and the income from and expenditure on these Schools are given in the statements on the next page.

STATEMENT I

Railway	Number of Schools								Number of Pupils							
	Intermediate		Secondary/High		Middle		Primary		Intermediate		Secondary/High		Middle		Primary	
	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8
Central	—	—	1	1	5	3†	15	17	—	—	1,483	1,513	1,101	1,020	1,945	2,170
Eastern	1	1	4	4*	4	4	12	12	672	668	2,339	2,388	1,127	1,134	747	770
Northern	1	1	3	3	—	—	5	5	738	728	605	629	—	—	439	510
North Eastern	—	—	4	6	—	—	4	4	—	—	2,605	3,171	—	—	1,130	620
Southern	—	—	1	1*	8	8	15	15	—	—	1,299	1,298	2,684	3,056	3,178	3,298
South Eastern	—	—	9	10*	5	4	21	21	—	—	5,758	6,753	1,560	1,301	4,821	4,970
Western	—	—	3	4	2	1	22	22	—	—	1,242	1,367	623	142	3,766	4,341
Chittaranjan Locomotive Works	—	—	2	2	—	—	7	7	—	—	716	692	—	—	1,088	1,052
TOTAL	2	2	27	31	24	20	101	103	1,410	1,396	16,047	17,811	7,095	6,653	17,114	17,731

* One school each on South Eastern, Eastern and Southern Railways has been converted into multipurpose school.
† Prior to 1957-8 two Primary Schools were being called 'Middle Schools' under some misapprehension.

STATEMENT II

(Figures in thousands)

Railway	Grants-in-aid		Income						Expenditure	
			Schools-fees		Miscellaneous		Total			
	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central	57	63	55	54	—	—	1,12	1,17	4,22	4,50
Eastern	24	80	1,53	1,49	16	20	1,93	2,49	5,98	6,78
Northern	31	34	2,37	2,24	6	6	2,74	2,64	6,74	6,77
North Eastern	11	15	1,29	86	1	7	1,41	1,08	2,99	3,34
Southern	1,20	1,13	1,06	98	3	10	2,29	2,21	5,67	6,13
South Eastern	46	48	2,84	2,90	—	—	3,30	3,38	13,26	15,10
Western	9	14	73	94	—	—	82	1,08	3,93	3,66
Chittaranjan Locomotive Works	15	15	36	34	—	—	51	49	1,93	2,05
TOTAL	3,13	3,82	10,73	10,29	26	43	14,12	14,54	44,72	48,33

(ii) *Staff Benefit Fund.*—A contribution of two rupees per employee was made from the Railway Revenues to the Staff Benefit Fund during the year. With a view to increasing the non-official element in Staff Benefit Fund Committees and enhancing their powers, the composition of these Committees at the Headquarters of each Railway, was modified and recognized unions given representation on them.

The Staff Benefit Fund Committees on the various Railways held in all 126 meetings at the Headquarters/Divisional/District levels. A majority of the constituent members attended each of these meetings as they were primarily responsible for the administration of the Fund, with the representatives of the Administration mostly filling the role of advisers.

The particulars of expenditure incurred during the year under the various heads are given in the statement on the next page.

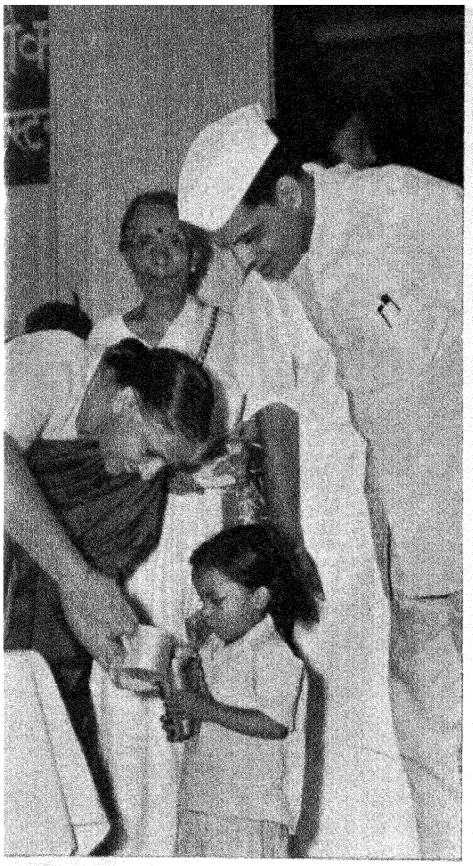
(iii) *Canteens.*—Besides the canteens statutorily required to be provided under the Factories Act, 1948, the Railways have provided, as a measure of staff welfare, canteens at places where there is a concentration of staff. During the year under review, a number of canteens, which were managed otherwise, were transferred to Committees of Management consisting of duly elected representatives of the Staff for whose benefit the canteens are run, representatives of shareholders of the co-operative society if managed by one, and the representatives of the Railway. The statement below shows the position of canteens during 1956-7 and 1957-8.

NUMBER OF CANTEENS

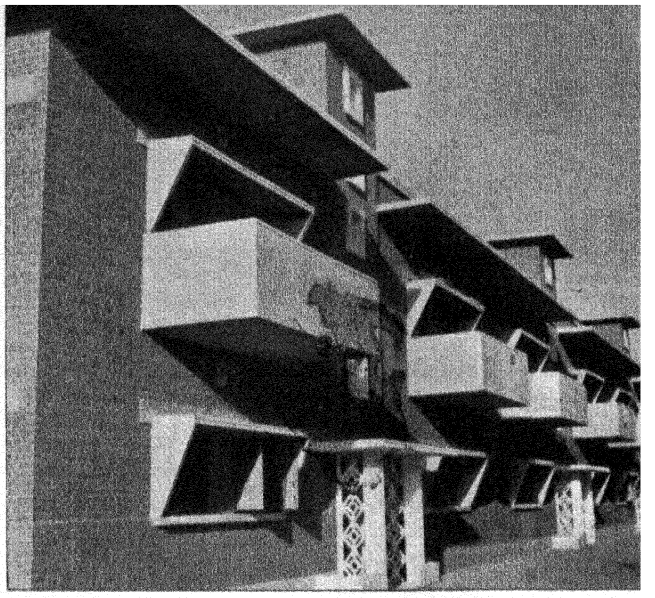
Railway	Departmental as on 31 March		Consumer co-operative societies as on 31 March		Canteen Committees of staff as on 31 March		Contractors as on 31 March		Total as on 31 March	
	1957	1958	1957	1958	1957	1958	1957	1958	1957	1958
Central	19	10	3	6	9	18	4	1	35	35
Eastern	—	3	—	7	23	21	3	3	26	34
Northern	—	—	1	1	34	38	—	—	35	39
North Eastern	2	2	5	5	2	2	4	5	13	14
Southern	7	6	5	5	10	11	1	1	23	23
South Eastern	—	—	1	1	27	19	—	—	28	20
Western	—	—	3	6	15	17	20	12	38	35
Chittaranjan Locomotive Works.	—	—	—	—	2	2	—	—	2	2
Integral Coach Factory	—	—	2	2	1	1	—	—	3	3
TOTAL	28	21	20	33	123	129	32	22	203	205

(iv) *Sports activities.*—This is one of the important activities financed partly from revenue and partly from the Staff Benefit Fund. As usual, Divisional/Regional/and Inter-Divisional/Inter-Regional tournaments and inter-Railway tournaments were held in all the popular games during the year under review.

Railwaymen and railway teams maintained their reputation and won several trophies in State and All-India tournaments and athletics. A railwayman set up a new record in the Marathon event at the National Games at Cuttack, his timing being only 55.7 seconds behind the world record. At the All-India level, Railways had again the honour and distinction of representing the country in International sports events. Four railwaymen represented India in Football in the Third Asian Games at Tokyo and one of them was included in the Indian Football Association Eleven against the Sudan Football team. One badminton player was selected to play for India in the Thomas Cup Badminton contest in Thailand. Seven railwaymen in the Madras State were selected to tour Ceylon with that State's Football team.

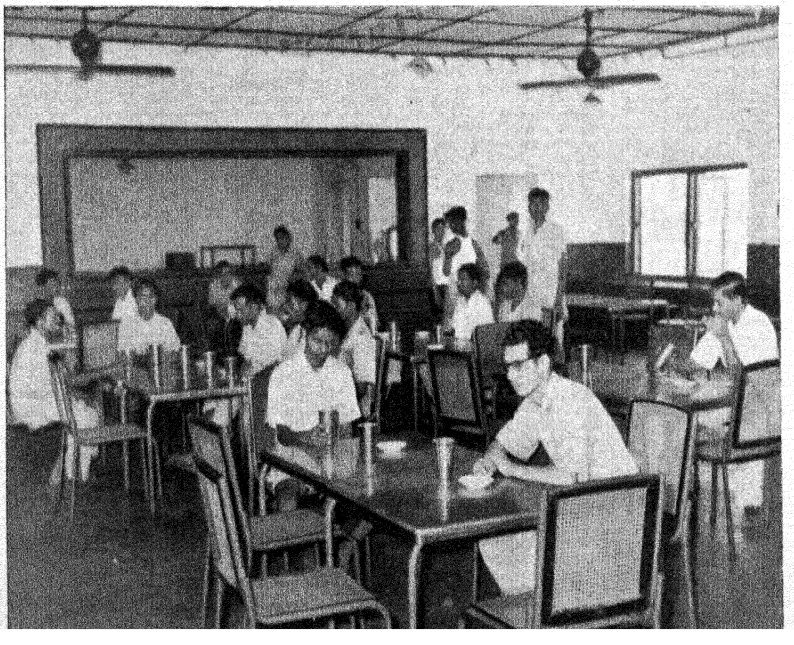


STRIBUTION OF MILK TO THE CHILDREN
RAILWAY STAFF—WESTERN RAILWAY



A VIEW OF NEWLY CONSTRUCTED QUARTERS FOR CLASS III ST.
AT DELHI KISHENGANJ—NORTHERN RAILWAY

THE STAFF CANTEEN AT THE WORKSHOPS AT KHARGPUR—SOUTH EASTERN
RAILWAY



STATEMENT SHOWING THE EXPENDITURE FOR STAFF BENEFIT FUND ON THE RAILWAYS DURING 1957-8

		Central	Eastern	Northern	North Eastern	Southern	South Eastern	Western	Chittaranjan Locomotive Works	Integral Coach Factory	Total
Relief of distress of the staff or their families—											
(1) Grants given to employees on account of loss suffered by them in floods, etc.	Rs.	—	3,944	1,56,945	9,318	1,770	35,556	—	—	284	2,07,817
(2) Payments made to dependents of Railway employees	Rs.	—	1,271		—	23,383	—	—	250	290	25,194
Schemes for sickness and child welfare—											
(3) Grants given to sick employees on long leave without pay (not for medical treatment)	Rs.	1,27,307	65,290	—	91,442	35,670	—	86,055	595	75	4,06,434
(4) Relief given for medical treatment	Rs.	—	13,919	45,845	2,350	25,450	55,562	—	3,550	930	1,47,606
(5) Relief in any other form	Rs.	8,538	60,071	52,550	5,883	14,139	17,703	6,415	753	—	1,66,052
Education of staff and of their children—											
(6) School run by Railway employees	Rs.	3,600	—	—	—	—	—	—	—	—	3,600
(7) Private schools	Rs.	—	—	40,160	—	—	10,000	5,300	700	—	56,160
(8) Scholarships and cost of books, etc.	Rs.	2,55,135	82,204	1,14,600	71,309	20,876	67,593	36,865	9,470	875	6,58,927
(9) Loans	Rs.	—	—	—	—	(—) 20	—	—	—	—	(—) 20
(10) Grants for capital expenditure	Rs.	—	—	—	250	945	—	—	—	—	1,195
Recreation and amusement of staff and their children—											
(11) Grants to sports associations	Rs.	55,000	60,290	—	35,397	49,750	44,500	28,280	14,050	13,650	3,00,917
(12) Holding of sports	Rs.	9,000	—	—	—	2,006	1,500	24,220	—	—	36,726
(13) Grants to recreation clubs	Rs.	12,500	25,835	1,30,000	3,803	2,686	14,280	2,000	200	—	1,91,304
(14) Grants to institutes	Rs.	14,726			18,634	8,006	24,985	10,280	2,750	1,500	80,881
(15) Children's fetes and sports	Rs.	12,300	3,500		128	6,430	4,000	7,000	—	90	33,448
(16) Allotment of capital expenditure for clubs, institutes, etc.	Rs.	—	—	—	45	(—) 500	—	25,000	—	—	24,545
Miscellaneous expenditure—											
(17) Boy Scouts Association	Rs.	—	13,000	10,000	3,013	21,096	7,331	5,000	—	200	59,640
(18) Other items	Rs.	16,636	28,951	34,012	30,609	4,290	5,419	39,565	100	100	1,59,682
TOTAL		5,14,742	3,58,275	5,84,112	2,72,181	2,15,977	2,88,429	2,75,980	32,418	17,994	25,60,108

(v) *Institutes and Clubs.*—The Institutes and recreation clubs on the Railways functioned satisfactorily during the year.

(vi) *Holiday Homes.*—The Holiday Homes for Class III and Class IV staff at various places proved to be popular, particularly among class III staff. One new Holiday Home at Pahalgam (Kashmir) was opened by the Northern Railway.

(vii) *Children's Camps.*—Nineteen camps or excursions were organized by the Railways during the year for the benefit of railwaymen's children. The details of the camps are given below:

Railway	Place of Camp	Number of children who took part
Central	Aurangabad (2 camps)	130 and 104 respectively
Eastern	Puri	78
Northern	Kashmir (2 camps)	173
North Eastern	Srinagar and Pahalgam	181
Southern	Ootacamund and Coonoor	76
	Madras City, Mahabalipuram, Tanjore, Madura and Courtallam.	77
South Eastern	Ranchi	66
	Waltair	79
Western	Udaipur (2 camps)	174 and 137 respectively
Chittaranjan Locomotives Works.	Mython and Durgapur (2 camps)	40 and 85 respectively.
	Calcutta and Jadavpur	45
	Santiniketan (2 camps)	44 and 20 respectively
	Durgapur	80
Intergral Coach Factory	Bangaloro and Mysore	19

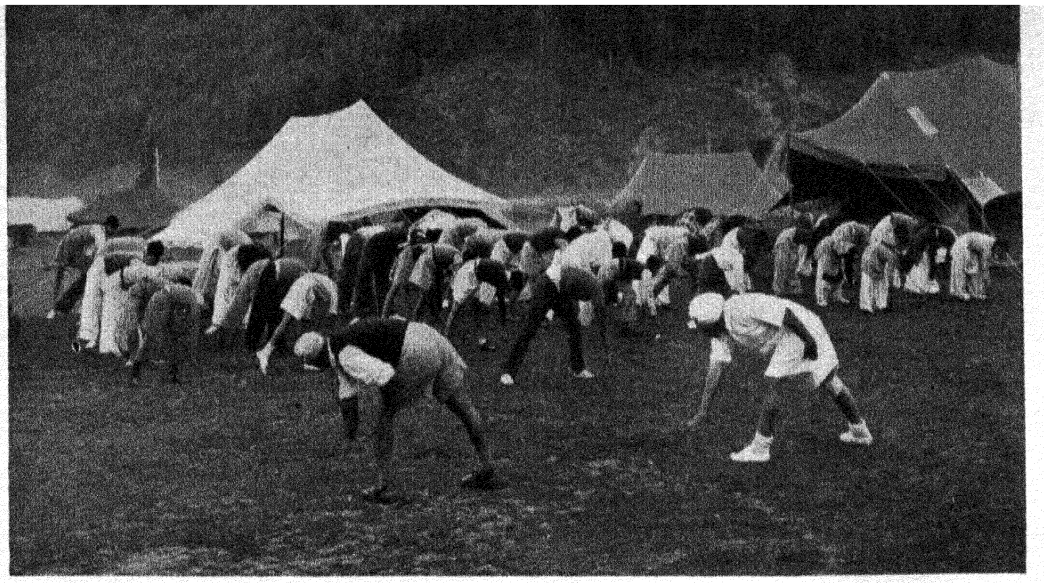
The expenditure on these camps is primarily met from the Staff Benefit Fund and the amount payable by the parents is kept low so as to bring the benefit within the reach of the lower-paid staff. Besides affording the children glimpses of the country outside their normal surroundings, these camps provide an opportunity for the children to mix together in outdoor life and to participate in healthy debates, elocution competitions, variety entertainments, sports, etc. These camps are greatly appreciated by the staff and children.

(viii) *Scholarships for Technical Education.*—During the year under review it was decided that 1000 scholarships ranging from Rs. 15 to Rs. 50 should be awarded every year in addition to the scholarships continuing from the preceding year. This scheme has been of considerable benefit to the staff.

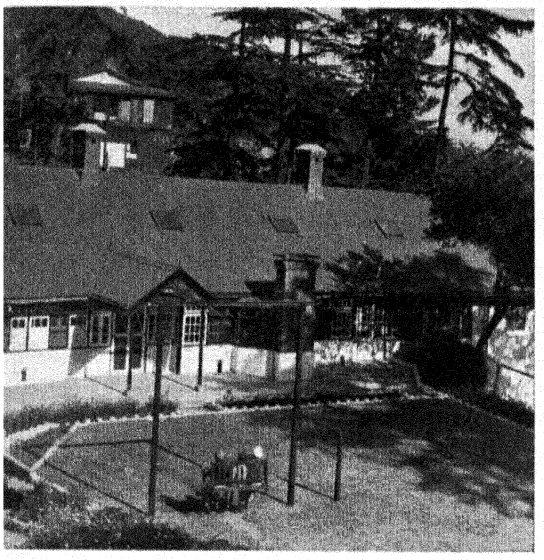
(ix) *Scouting.*—The Scouts and Guides Organization on the Railways gained added impetus and its activities considerably increased. Staff training camps, service camps and rallies were held during the year.

(x) *Labour Welfare Organization.*—The Welfare Organization on the Railways consisting of Welfare and Assistant Welfare Inspectors was augmented during the year. These Welfare Inspectors, besides attending to the expeditious disposal of staff representations and grievances and finalization of their settlement dues after retirement, paid attention to various social and cultural activities like organization of sports, children's camps, cinema shows, festival and social gatherings, dramas, folk dances, music competitions, etc. The Inspectors also helped in extending the co-operative movement among the staff and in organizing the small savings scheme, literacy classes and welfare centres for the benefit of staff and their families.

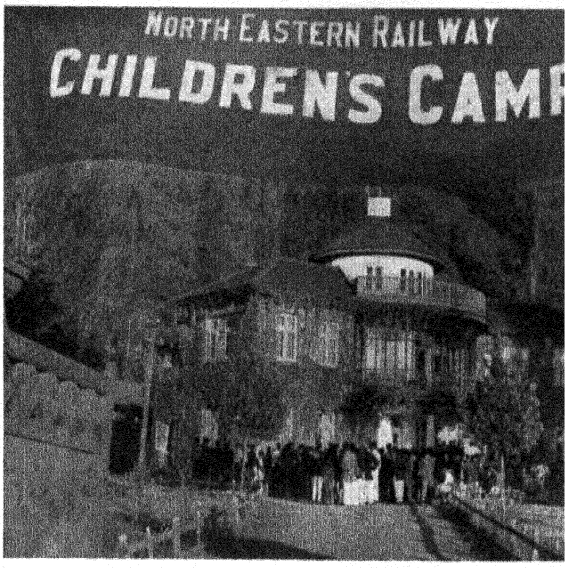
157. Service conditions of staff.—(i) *Leave.*—All Class IV railway employees governed by the Liberalized Leave Rules have been brought on par with other Class I, II and III railway staff in the matter of earning leave from 1 April 1957.



A VIEW OF MORNING P.T. AT CHILDRENS CAMP AT PAHALGAM KASHMIR—NORTHERN RAILWAY

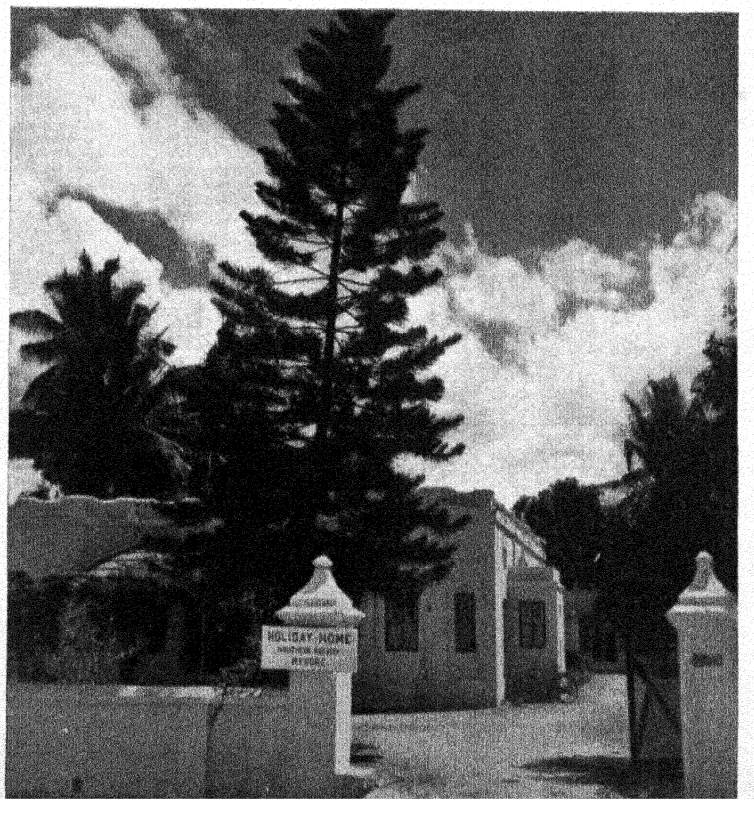


THE HOLIDAY HOME FOR THE RAILWAY STAFF AT SIMLA—NORTHERN RAILWAY



CHILDREN OF EMPLOYEES AT PALACE HOTE SRINAGAR DURING THE CHILDREN'S CAMP HEL AT KASHMIR IN JUNE 1957—NORTH EASTER RAILWAY

MYSORE HOLIDAY HOME—FRONT VIEW—SOUTHERN RAILWAY



(ii) *Dearness allowance.*—An *ad hoc* increase of Rs. 5 in the dearness allowance has been sanctioned to railway staff drawing basic salary upto Rs. 300 per month.

(iii) *Pension scheme.*—As a result of various representations received from and on behalf of railway labour, which were also voiced in the Parliament, expressing preference for the pensionary benefits, as for other Civil Services of the Government, in substitution of the existing retirement benefits under the State Railway Provident Fund Rules, the Railway Minister in his speech made at the time of presenting the Railway Budget for 1957-8, referred to certain proposals then under consideration for the introduction of the Pension system for railway employees. Subsequently, consultations were held with the National Federation of Indian Railwaymen who accepted in the main the Pensionary scheme of retirement benefits as meeting a demand which had been made by the Federation. Final orders introducing on the Railways the Pension scheme, as obtaining on the Civil side, were issued on 16 November 1957. In the case of Class IV employees, however, in modification of the Pension Rules obtaining on the Civil side, for those who retire after 30 years of qualifying service, an additional gratuity of Rs. 200 per year of qualifying service in excess of 30 years, subject to a maximum of Rs. 1000, has been allowed. In terms of these orders, all railway servants entering service on or after 16 November 1957 are automatically governed by the Pension Rules. Railway servants who were in service on 15 November 1957 or demitted service between 1 April 1957 to 15 November 1957 have been given an option to be governed by the Pension Rules or to retain their existing retirement benefits under the State Railway Provident Fund Rules. In the case of all those railway servants, referred to above, who opt for pension, their service would be deemed to have been in the pensionable establishment from the commencement of their service irrespective of the date they began subscribing to the State Railway Provident Fund. Even after the introduction of the Pension system, staff eligible for pension shall subscribe to the State Railway Provident Fund at the existing rate, on a compulsory basis. Such staff will, however, not be eligible for any Government contribution or special contribution to the Provident Fund.

158. Co-operative Credit Societies and Banks.—There were 26 Co-operative Credit Societies of Railwaymen at the end of the year. They had a membership of 583,697 at the end of the year as against 559,046 at the beginning. The paid up share capital of these societies rose from Rs. 354·66 lakhs to Rs. 382·58 lakhs. More than 60 per cent of the railwaymen are members of these societies, the average share capital which they have subscribed amounting to about Rs. 70 per head. The following statement shows the improvement in their resources position during the last two years:

(Figures in lakhs of rupees)

	1956-7	1957-8
(*a*) Owned capital		
Share capital	354·66	382·58
Reserve fund	92·16	100·86
Other funds	105·14	129·87
(*b*) Borrowed capital		
Deposits		
from members	995·73	1,352·02
from non-members	*	304·41
other borrowings	60·30	67·63
Total working capital	2,244·86**	2,337·37

* Not available.
** Inclusive of deposits from non-members, etc.

The owned capital of the societies has increased during the year from Rs. 551·96 lakhs to Rs. 613·31 lakhs. This is an index of their increasing financial strength. Similarly the inflow of deposits into these societies has also recorded a substantial improvement during the year. This is proof of the increasing confidence that these societies enjoy among railwaymen.

The following statement shows the loan transactions of the societies with the members during the year:

	(Figures in lakhs of rupees)
Loans outstanding at the beginning of the year	2,208·09
Issued during the year	1,551·81
Repaid during the year	1,309·82
Outstanding at the end of the year	2,450·08

The loan transactions of the societies are steadily increasing and they are being called upon to meet larger and larger demands for loans from members from year to year, the increase during 1957-8 being about 11 per cent over the figures of 1956-7.

All the 26 societies worked at a profit, amounting to Rs. 29·72 lakhs. This works out to about 1·5 per cent of the turnover. Some of the societies declared a dividend of 6¼ per cent on the value of shares during the year.

The Jackson Co-operative Bank on the Western Railway, the Central Employees' Co-operative Bank, Secunderabad, the Northern Railway Co-operative Credit Society, Lucknow and the South Eastern Railway Employees' Urban Bank, Calcutta, also paid bonus to their staff from the net profits. The total of such bonus disbursed during the year amounted to Rs. 32,274.

Some of the credit societies are serving the entire railway zones ; in some of them, the membership is as high as 50,000 or more. Generally the societies are being managed efficiently and are of real service to the railway community.

159. Railwaymen's Consumer Co-operative Societies.—The working of the Railwaymen's Consumer Co-operative Societies received further impetus. Their number increased from 110 to 120 during the year. The following statement shows the comparative progress in respect of membership, share-capital and business done by them during the last two years :

	1956-7	1957-8
Number of members	51,930	58,391
Paid up share capital (lakhs) Rs.	7·37	9·11
Total working capital (lakhs) Rs.	16·36	21·45
Purchases (lakhs) Rs.	60·02	77·22
Sales (lakhs) Rs.	62·54	78·66

About 7,000 more railwaymen have come within the fold of the Co-operative Consumer movement during the year, bringing in an additional capital of about Rs. 2 lakhs. The sales too have recorded an increase of about 25 per cent over those of the last year. These features are evidence of the increasing popularity of the Consumer Societies among the railway community.

Of the 120 societies, 107 worked at a gross profit aggregating to Rs. 4 57 lakhs, while the trading results of 13 societies revealed a gross loss of Rs. 56,823. After meeting the establishment and other overhead charges, 85 societies worked at a net profit, while 35 sustained a net loss. 28 of the societies declared a dividend up to a maximum of 6¼ per cent on the value of shares, from the net profits earned, while 9 societies declared, in addition, a rebate on the purchases made by the members. Another good feature was that ten societies also gave bonus to their staff from out of the profits earned, the amount disbursed as bonus being Rs. 5,325.

While most of the societies had only one store each, some operated more ; for example, the co-operative stores at Trichinopoly and Mhow operated 5 and 3 branches respectively. The Railways continued to give assistance to these societies in the shape of provision of accommodation on nominal rent, besides subsidising 50 per cent of the establishment charges incurred by the new societies up to a period of 3 years. The total subsidy disbursed to the societies during the year amounted to Rs. 49,100. The Railways had provided buildings on nominal rent to 107 societies and 6 societies have been permitted to hire outside buildings, the rent of which was subsidised by the Railways. Seven societies had their own buildings.

In addition to the 120 societies actively functioning at the end of the year, another fifteen societies have been newly registered during 1957-8 and these are expected to open their stores during 1958-9.

The Consumer Co-operative Movement is thus gradually, but firmly, taking root on the railways.

160. Other types of Co-operative Societies.—At the end of the year, there were four Co-operative Housing Societies consisting exclusively of Railwaymen recognized by the Railway Administrations. These societies had between them 388 members with a paid up share capital of Rs. 58,320. The working capital of these societies amounted to Rs. 9·47 lakhs of which Rs. 4·42 lakhs represented loans obtained by the societies from Government as well as deposits made by individuals for construction of houses. They disbursed loans to the extent of Rs. 26,450 during the year and a sum of Rs. 55,801 was outstanding against members at the end of the year. A loan of Rs. 82,000 was sanctioned to the Co-operative Housing Society on the Western Railway at Bombay by the Government of Bombay for construction of houses but this amount was not drawn till the end of the year.

The members of these societies had constructed 47 houses with the help of the societies till the beginning of the year and 9 new houses were constructed during the year, making a total of 56 houses till the end of the year. These houses were valued at Rs. 2·42 lakhs. The societies had also invested a sum of Rs. 2·07 lakhs till the end of the year in acquiring plots.

It is the policy of the Railway Board to encourage the formation of housing societies of Railwaymen wherever possible, so that they might take advantage of the loans under the Low Income Group Housing Scheme, which are made available through State Governments, or the advances sanctioned by the Ministry of Works, Housing and Supply and build their own houses. In order that the employees coming under the low income group may take advantage of these loans to a larger extent than hitherto, the Central Government has suggested to State Governments that they might try to arrange, where possible, the allotment of land to intending builders at as low a price as possible. Co-operative Housing Societies can either approach the State Governments for provision of such house-sites on behalf of their members, or, where this is not possible, they may acquire suitable land on their own initiative and allot it to members after development.

161. Provision of quarters for staff.—In pursuance of the policy of providing quarters for the essential staff, who are required to live near the site of their work, and for the non-essential staff at places where private accommodation is not readily available, 15,006 quarters were constructed on Indian Railways during the year 1957-8, as compared to 9,645 quarters during 1956-7. The details of the quarters provided on individual Railways are as under :

Railway	Type I	Type II	Type III	Type IV	Barracks	Special Officers' Quarters: Type IV	Special Officers' Quarters: Type V	Special Officers' Quarters: Type VI	Total
Central	1,046	658	81	5	6	—	17	—	1,813
Eastern	899	458	57	2	26	—	4*	—	1,446
Northern	1,826	1,268	60	26	3	—	2	—	3,185
North Eastern	601	510	60	7	17	—	30	—	1,225
Northeast Frontier	903	587	15	—	—	—	15	—	1,520
Southern	700	1,092	80	18	—	—	10	—	1,900
South Eastern	538	233	3	—	4	—	24	—	802
Western	1,303	1,085	133	20	104	—	66	—	2,711
Ganga Bridge Project	216	188	—	—	—	—	—	—	404
Total	8,032	6,079	489	78	160	—	168	—	15,006

* Additional accommodation provided for 4 officers by partitioning existing bungalows.

162. Activities of the Medical Department.—During the year under review the following facilities were provided :

Dental clinics in charge of whole time dental surgeons were provided at the headquarters hospital of each Railway administration in addition to part time dentists at most of the divisional/district hospitals of the Railways.

At headquarters hospitals services of honorary consultants of eminence have been provided on most of the Railways in addition to specialists' services available at divisional/district hospitals.

For control and treatment (domiciliary) of tuberculosis, 12 additional chest clinics were established bringing the total to 45 and for indoor treatment the number of beds reserved in approved sanatoria was 538 in addition to 192 maintained in Railway hospitals and chest clinics.

During the year under review the following were added :

(i) 6 new health units bringing the total to 440 ;

(ii) 407 additional indoor beds bringing the total to 3,950 ; and

(iii) 6 mobile vans bringing the total to 9 for the benefit of the Railway staff working at places away from the dispensary and where train services are not frequent.

Orders removing all distinction between class III and class IV staff in the matter of medical attendance and treatment were issued during the year under review.

The control of infant and maternal mortality and morbidity resulting from confinement was quite satisfactory during the year under review and 65 lady doctors and 266 midwives were working on all Railways.

The health of the staff and their families remained satisfactory.

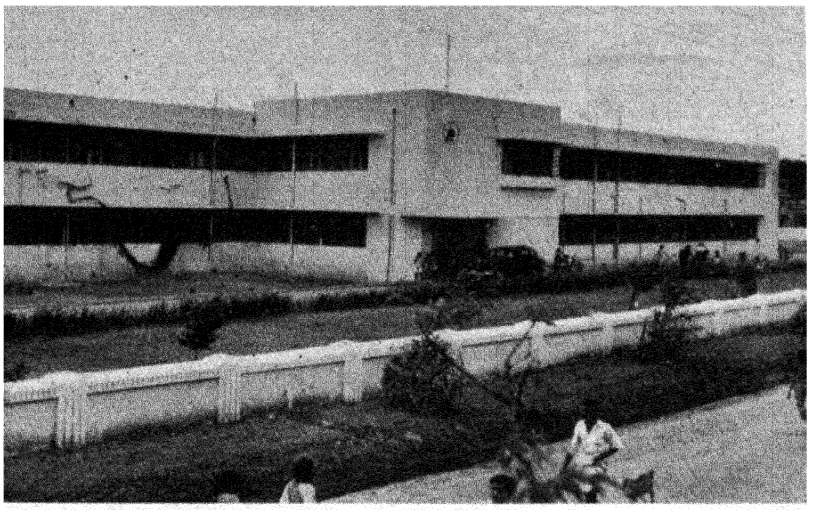
A comparative statement summarizing the activities of the Medical Department and showing up-to-date equipment available on the Indian Railways during the year 1956-7 and 1957-8 is given on the next page.

163. Vigilance Organization.—The Vigilance Organization of the Railway Board continued to function during 1957-8 and the Central Investigating Agency set up in 1956-7 was organised with 10 Inspectors and a group of havildars and watchers. The Agency investigated 194 cases of corruption and various other types of malpractices particularly those having wide ramifications. Of these, 6 cases were referred to the Special Police Establishment for further investigation and 6 more to the Civil Police for further action as these cases disclosed offences which were fit for prosecution. 35 cases were referred to the Railway Administration for taking suitable departmental action on the basis of material brought out in the investigation.

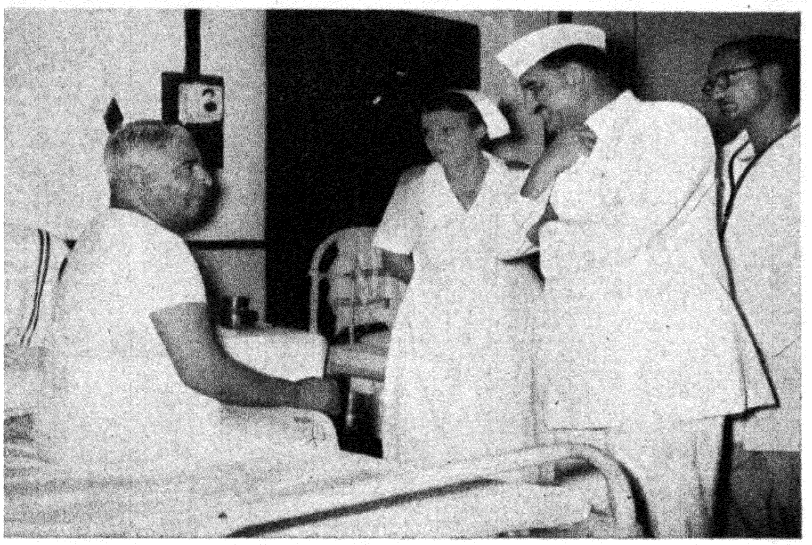
The Vigilance Organizations on the Railways intensified their activities during the year in various spheres with an emphasis on prevention. They have been particularly effective as a liaison between the Special Police Establishment and the various departments on the Railways and this has contributed to better relations and speedier examination of cases. The total number of staff engaged on vigilance work during the year on the Indian Railways was as follows:

Officers	25
Inspectors	74
Assistant Inspectors	46
Other ranks	131

At the beginning of the year 2,097 cases were pending and 3,559 new cases were registered during the year making a total of 5,656 cases for disposal. Of these, 1,886 cases were dropped as the charges were found to be untrue or too vague or not established for lack of proof. Departmental action was finalized in 1,301 cases as compared to 511 cases finalized during the previous year. At the end of the year 2,469 cases remained pending. As a result of departmental action, punishments were imposed in 764 cases during 1957-8 as compared to 463 cases during 1956-7.

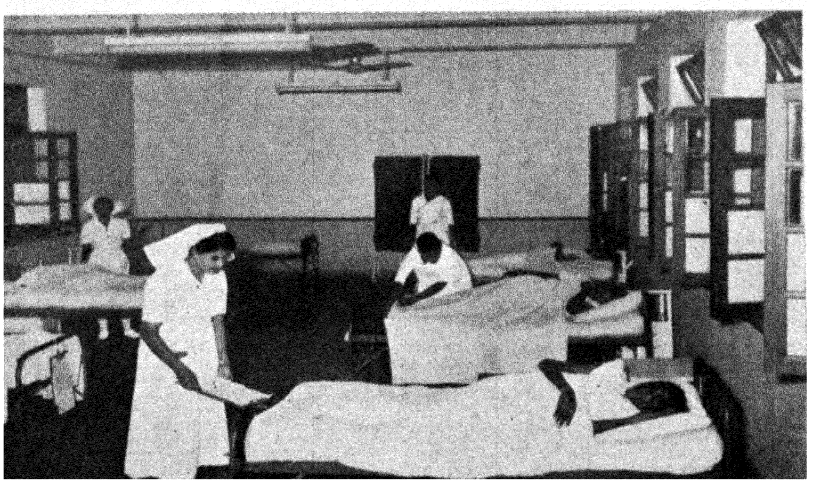


RAILWAY HOSPITAL, MADURAI—SOUTHERN RAILWAY



IRI SHAH NAWAZ KHAN, DEPUTY MINISTER FOR RAILWAYS
ALKING TO A PATIENT AT CENTRAL HOSPITAL, GORAKHPUR—
NORTH EASTERN RAILWAY

IEW OF A WOMEN'S WARD, MADURAI HOSPITAL—SOUTHERI
RAILWAY



COMPARATIVE STATEMENT OF MEDICAL AND HEALTH SERVICES ON INDIAN RAILWAYS FOR THE YEARS 1956-7 AND 1957-8

Particulars	Central Railway (1)		Eastern Railway (2)		Northern Railway (3)		North Eastern Railway (4)		Southern Railway (5)		South Eastern Railway (6)		Western Railway (7)		Total (8)	
	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8	1956-7	1957-8
(1) Number of Railway Staff	182,774	192,341	159,470	168,465	161,041	169,957	126,869	135,922	158,536	160,326	116,116	120,683	136,789	145,194	1,041,595	1,092,888
(2) Cost of Medical Services Rs. (in thousands)	30,73	37,88	31,14	37,23	31,79	41,70	29,78	36,51	30,19	36,63	23,50	28,53	28,32	32,96	2,05,45	2,51,44
(3) Cost of Medical Services per head of staff per annum Rs.	16·8	19·7	19·5	22·1	19·7	24·5	23·5	26·9	19·0	22·8	20·2	23·6	20·7	22·7	19·9	23·2
(4) Cost of Health Services Rs. (in thousands)	33,03	37,12	35,95	35,53	45,15	48,94	41,25	45,97	21,41	23,68	29,19	27,20	17,54	18,67	2,23,52	2,37,11
(5) Cost of health services per head of staff per annum Rs.	18·1	19·3	22·5	21·1	28·0	28·8	32·5	33·8	13·5	14·8	25·1	22·5	12·8	12·9	21·7	21·9
(6) Number of:																
(i) Hospitals	12	10	15	10	12	13	12	13	13	13	7	7	10	10	81	76*
(ii) Dispensaries	48	52	58	58	76	76	69	65	67	68	54	55	62	66	434	440
(iii) Beds	527	553	614	616	613	754	533	603	506	617	399	394	351	413	3,543	3,950
(7) Equipment:																
(a) Diagnostic apparatus— (i) X-Ray	11	11	14	14	7	8	7	7	9	10	11	11	14	16	73	77
(ii) Electro-cardiogram	3	3	1	1	1	2	1	1	2	2	1	1	3	3	12	13
(b) Electro-medical and Physio-therapy— (i) Diathermy	8	10	4	4	7	7	9	9	..	..	4	4	9	9	45	47
(ii) Short-wave			3	3	..	..			1	1	..	..				
(iii) Infra-Red	29	30	9	10	6	7	4	4	5	5	30	28	32	43	115	127
(iv) Panto-Stat	2	2	..	..	2	2	1	1	1	2	..	..	1	1	7	8
(v) Ultra-violet	13	13	6	7	6	6	5	5	4	4	3	3	35	39	72	77
(c) Massaging and Rehabilitation apparatus	..	..	..	..	1	1	2	2	..	..	..	..	1	1	4	4

*Excludes 5 sub-hospitals of Eastern and 2 of Central Railways which have been down graded as Health Units Grade I.

The table indicating various penalties imposed during 1956-7 and 1957-8 in respect of both gazetted and non-gazetted staff are indicated as under:

Nature of Punishment	1956-7		1957-8	
	Gazetted	Non-Gazetted	Gazetted	Non-Gazetted
Dismissal	—	20	—	46
Removal	1	94	1	116
Reduction	—	46	—	29
Stoppage of increments, Passes etc.	—	124	2	298
Other punishments	1	177	6	266
	2	461	9	755

The figures above indicate improvement in two aspects of special significance in Vigilance Administration:

(i) acceleration of departmental action and prompt disposal of disciplinary cases on the Railways—a 65 per cent increase in the number of cases in which penalties have been imposed finally.

(ii) Increased attention to defaults on the part of supervisory staff particularly in Gazetted ranks.

Further the cases of inadequate punishments were given prompt attention and scrutinised at higher levels both by the Railway Administrations and the Railway Board, and necessary reviews and enhancement of penalties were undertaken in a number of cases which merited such attention.

Prevention.—The preventive aspect of vigilance work given further attention and, by and large, the preventive measures have been found to be effective and of value from the administrative point of view.

Engineering Vigilance Cell.—During the year, steps were taken to set up Inspection and Checking teams of officers on each Railway known as Engineering Vigilance Cell with one senior scale Engineering officer and one Senior Accounts Officer.

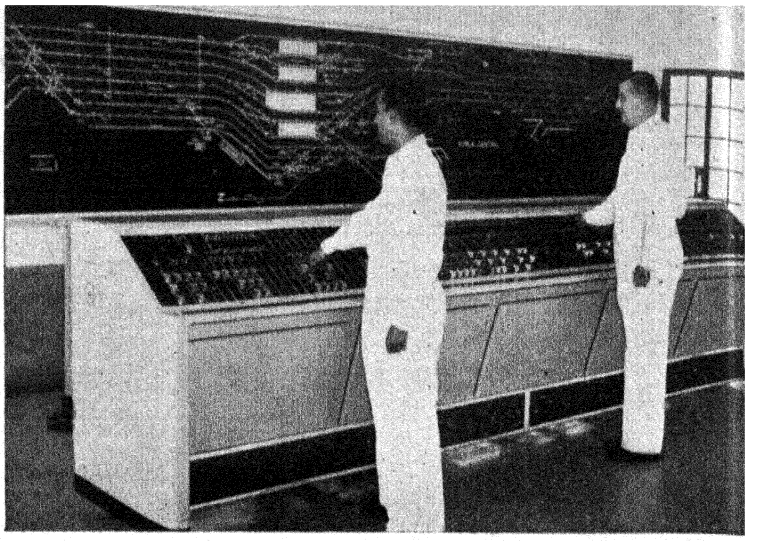
This Cell is entrusted with the duties of regular and surprise inspections, checking of measurements, classifications, deeds, specifications, etc., and is working under the administrative control of Senior Deputy General Manager and the technical guidance of the Chief Engineer. These Cells have amply justified themselves.

Drive and direction at high levels on the Railways and from the Railway Board have resulted in the increased effectiveness of the Vigilance Organization. There is also a better appreciation among the public of the Railway Board's determination to tackle this difficult problem of corruption.

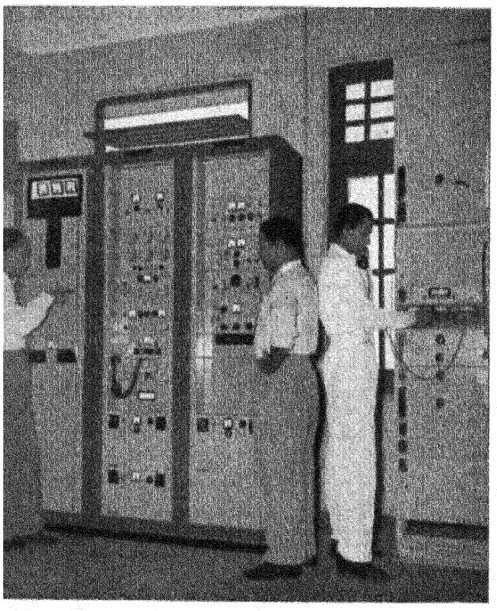
164. Miscellaneous.—The working of the Standing Screening Committees (Inventions and Suggestions) on the Railways has indicated that the scheme has been very favourably received by Railwaymen at all levels and some valuable suggestions and inventions have been received and accepted. During the year a total of 1,151 suggestions and inventions were received, out of which 64 were accepted for being suitably rewarded. The total amount of cash rewards was Rs. 5,614.

To meet the shortage of Hindi Telegraphists on Railways, it has been decided to offer a small incentive to Telegraphists in service acquiring a knowledge of Hindi Morse.

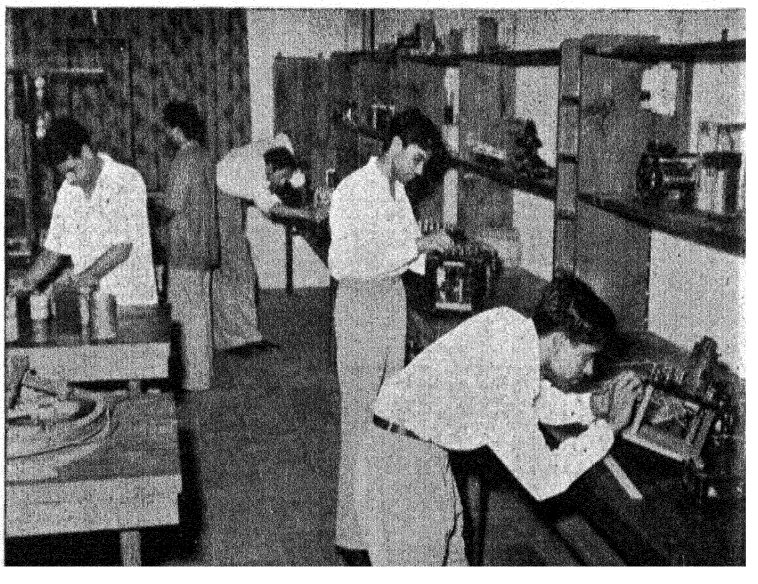
The Railways continued to take advantage of the offers extended under the various international Plans, Programmes and Schemes for deputing staff for technical training outside India. During the year under review, 34 employees were so deputed.



ROUTE RELAY INTERLOCKING PANEL, KURLA—CENTRAL RAILWAY



THE VHF RADIO MULTI-CHANNEL SYSTEM TERMINAL AND CHANNELLING EQUIPMENT AT SURAT—WESTERN RAILWAY



A STUDY OF SIGNALLING RELAYS—CENTRAL RAILWAY

CHAPTER IX

SIGNALLING AND TELECOMMUNICATION

165. General.—Signalling and Telecommunication arrangements and equipment on the Railways continued to be maintained efficiently during the year ; a large number of improvements to signalling and safety works and works in connection with line capacity were carried out. Considerable advances were also made during the year on improvements in the signalling standards and bringing them in line with developments in signalling practices abroad. A special drive was initiated for securing in the country self-sufficiency in mechanical signalling materials, the annual requirement of which during the Second Five Year Plan has increased more than ten times. Special steps were also taken for accelerating the pace of producing the designs and specifications of a large number of electrical signalling items and of encouraging the indigenous firms for taking up their manufacture.

Eight Probationary Assistant Signal and Telecommunication Engineers and eighteen Temporary Engineers joined Railways and were placed under training. A large number of Apprentice Signal Inspectors were also recruited on Railways. An All-India School was set up for their training at Secunderabad, which started its first course on 1 December 1957.

166. Signalling Works.—The line capacity works carried out during the year included lengthening of loops, provision of additional loops, opening of new crossing stations, remodelling of junctions, opening of new lines and doublings. In addition, a large number of works involving interlocking of non-interlocked stations, raising the standard of interlocking from I to II and III, interlocking of level crossings, and provision of token instruments on single line sections, were executed. The cost involved for such works, apart from the line capacity works, was about Rs. 2·5 crores. Some of the major works executed were as under :

Central Railway.—Four stations on the Grand Trunk Route with multiple-aspect upper quadrant signalling ; Automatic block system on Kurla-Bhandup section with colour light signals and continuous track circuits ; Interlocking of seven new crossing stations ; 'Last Stop' Signal Control at twenty stations and interlocking arrangements for twenty one level crossing gates.

The work of providing Route Relay Interlocking at Kurla, at an estimated cost of Rs. 30 lakhs, also made steady progress and was 80 per cent completed.

Eastern Railway.—Extension of loops on all main line sections; Interlocking of six non-interlocked stations ; Provision of Lock and Block on seven stations of the main line sections ; and provision of colour light signals at Howrah-Bandel section in connection with the electrification.

Northern Railway.—Provision of track circuits at Jullundur City; Interlocking of five stations in Delhi and Bikaner Divisions ; Raising standard of interlocking at four stations in Lucknow and Allahabad Divisions ; Provision of electric reversers at ten stations ; Provision of 'last stop' signal control at thirteen stations in Moradabad and Allahabad Divisions; and replacement of old and worn-out signal gears at ten stations.

North Eastern Railway.—Interlocking of nine stations; Raising standard of interlocking at four stations ; Interlocking of three new crossing stations ; and provision of Neale's token instruments between Salimpur and Aunrihar.

Northeast Frontier Railway.—Interlocking of four non-interlocked stations.

Southern Railway.—Interlocking of twelve non-interlocked stations and raising standard of interlocking at ten stations.

South Eastern Railway.—Interlocking of five non-interlocked stations; Replacement of interlocking gear at five stations ; Interlocking of ten new

crossing stations ; and Interlocking in connection with the doubling, additional loops and yard remodelling due to Steel Projects.

Western Railway.—Installation of Route Relay Interlocking at temporary Churchgate station and final installation of new Route Relay Interlocking to suit the new Churchgate station ; Interlocking of eight non-interlocked stations ; Interlocking of twelve new crossing stations and provision of token instruments; Additional loops at thirty three stations and extension at others ; and signalling alterations in connection with the provision of slow-line at three block sections, as a step towards doubling of the section Godhra-Ratlam.

167. Signal Workshops.—The setting up of signal workshops on Northern, North Eastern, Southern and Western Railways and expansion of the existing workshops on Central and Eastern Railways were progressed during the year. The Central Railway have shown considerable expansion of production and the workshops on Northern, North Eastern, Southern and Western Railways are expected to start functioning in the new premises next year. These workshops would provide a fair proportion of material required for new works and for maintenance of equipment.

168. Telecommunication.—(*a*) The telecommunication works costing about Rs. 50 lakhs carried out during the year included replacement of some of the existing wireless sets, provision of new ones, replacement of some manual exchanges by automatic types and expansion of other exchanges, provision of teleprinters on busy telegraph links and provision of public address system at a number of stations. Some of the important works are shown below :

I. *Wireless.*—(i) Four wireless links were added to the High Frequency Wireless Telegraphy/Telephony Links—one each on the Eastern and South-Eastern Railways and two on the Western Railway—to the existing extensive net-work, totalling one hundred and one at the end of the year.

(ii) Wireless stations at Kalyan, Igatpuri and Lonavla on Central Railway were established to provide emergency communication during failures of land lines in monsoon.

(iii) Six temporary wireless stations were opened on the South Eastern Railway for radio telephony communication in addition to, three temporary wireless stations opened at Rourkela, Bimlagarh and Barsua for radio telephony communication in the construction area.

(iv) V. H. F. duplex radio telephony link was provided between Katihar and Sahibganj ; V. H. F. radio telephone link between Katihar-Giddapahar-Alipurduar ; and V. H. F. multi-channel link between Surat and Bhavnagar.

II. *Exchanges.*—Telephone exchanges added were as under:

Central Railway.—25-4A P.A.X. at Financial Adviser and Chief Accounts Officer's Office, Bombay ; 25/35 4-A P.A.X. at Byculla Hospital ; 20 line magneto exchange at Khandwa ; 12 line magneto exchange at Mathura ; and 25/35 4-A P.A.X. at Lallaguda Workshop.

Northern Railway.—50 Line P.A.X. in New Central Hospital, New Delhi ; 50 line C. B. exchange in Divisional Superintendent Office, Jodhpur ; 25 line P.A.X. in Jodhpur workshop ; and 10 line P.A.X. in Divisional Superintendent Office, Bikaner.

North Eastern Railway.—25 Line P.A.X. at Garhara was provided. The existing 300 line multiple C.B. Exchange at Gorakhpur was replaced by a 600 line Automatic Exchange.

Northeast Frontier Railway.—300 Line multiple C.B. exchange at Pandu.

Western Railway.—300/600 Line S.A.X. at Churchgate; 300/600 line S.A.X. at Bombay Central; 100 line Auto-exchange at Baroda; and 200 line Auto-exchange at Ajmer.

III. *Public Address system.*—Public address system was installed at—

3 stations on the Central Railway ;
1 station on the Northern Railway ;

3 stations on North Eastern Railway ;

6 stations on Northeast Frontier Railway ; and

5 stations on the Western Railway.

Talk-back and paging loudspeakers were provided in the marshalling yards at Wadi Bundur, Mughalsarai and Bandra.

IV. *P. and T. Telephones at Railway Stations.*—152 Telephones were installed at railway stations for the convenience of passengers, bringing the total of such telephones to 1,163.

V. *Administrative Trunk Circuits.*—Administrative trunk circuits were introduced on Howrah-Sahibganj and Banaras-Chupra Sections ; Carrier Channel was introduced on Calcutta-Dinapore Section ; and Section Control was provided on ten sections covering 1,048 miles and Deputy Control Circuits on three sections covering 418 miles on the various Railways.

VI. *Teleprinters* —There were twenty teleprinter links working on Railways as on 31 March 1958. Out of these, five links were added during the year, two on the Central and one each on the Eastern, Northern and South-Eastern Railways.

VII. *Telegraph Circuits.*—Six Telegraph circuits covering about 500 miles were introduced over the various railways.

VIII. *Telegraph Traffic.*—The telegraph and wireless traffic worked on the Indian Railways was as under :

Telegraph (including service, paid and Posts and Telegraphs service messages)	391 16 lakhs
Teleprinter	7.22 ,,
Wireless	23.47 ,,
Radio telephony calls	1.18 ,,

169. Materials position.—As there was some difficulty in the steady flow of materials, special steps were taken to assist the industry in developing their capacity to increase their production, and closer liaison was established with the Director General, Supplies and Disposals for expeditious covering of indents and keeping contacts with the firms with a view to removing their difficulties—both procedural and technical.

CHAPTER X

AMENITIES TO PASSENGERS AND OTHER RAILWAY USERS

170. General.—Provision of amenities towards making rail travel more comfortable continued to receive the close attention of Railway Administrations. Works undertaken with this object are particularly watched and progressed with care and adequate financial provision for these is made each year. They comprise a wide range of items namely, the provision of modern carriages, fans and fittings, waiting rooms and halls, opening of new stations, booking offices and out-agencies, electrification of stations, raising, paving and provision of covered platforms, catering arrangements, supply of drinking water, improved type of lavatories, bathing facilities on platforms, improved sanitation in station premises and passenger carriages, cloak rooms and reservation facilities and sleeping accommodation for third class passengers. Installation of public address equipment at some of the more important stations and social education have also been given due attention. During the year under review, instructions were issued to railways to try, as an experimental measure, on one pair of long distance Janata trains on each Zonal Railway a scheme for the earmarking of separate accommodation for passengers travelling over various specified distances.

Some of the important improvements are referred to in the following paragraphs.

171. Improved lower class coaches.—Lower class coaches built to improved specifications were put into service during the year, totalling 732 Broad gauge, 298 Metre gauge and 61 Narrow gauge coaches as shown below:

	Broad	Metre	Narrow
Indigenous manufactures—			
(*a*) Hindustan Aircraft Limited (All steel)	170	—	-
(*b*) Railway workshops—			
(i) Wooden bodied coaches built to improved design . .	202	158	61
(ii) Light weight integral type coaches built by the Integral Coach Factory, Perambur and furnished in railway workshops. .	07	—	—
(iii) All steel shells built by M/s Jessops & Co. and furnished in railway workshops.	—	129	—
Foreign manufactures—			
(*a*) Furnished in railway workshops All-steel shells *ex*-Belgium . .	—	11	—
(*b*) Electric multiple unit coaches			
ex-Italy	37	—	—
ex-Japan	74	—	-
ex-Germany	30	—	—
(*c*) Rail Cars *ex*-Australia	12	—	—

172. Improvements to coaching stock.—All coaches are at present constructed to the latest design which provides for better amenities. Apart from the Integral Coach Factory, Perambur, the Hindustan Aircraft Limited will also produce in future integral type light weight coaches of all steel construction. This would eventually make it possible to attach more coaches to a train and also reduce the number of casualties in the event of an accident, owing to the anti-telescopic character of the integral coaches.

1,101 third class coaches were fitted with fans during 1957-8. The policy of fitting of fans in old third class coaches is being pursued.

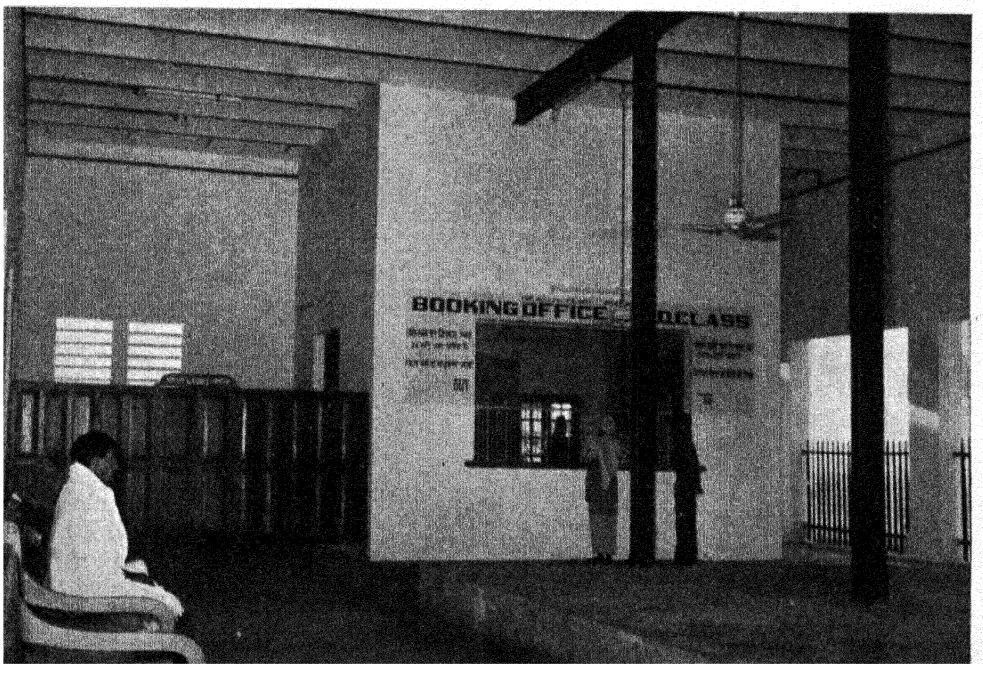
173. Booking offices and out-agencies.—The following out-agencies were opened during the year under review:

Railway	Name of out-agency	Serving station	Date of opening	Traffic for which opened
Northern . .	Jaisalmer . .	Pokaran . .	15 November 1957 .	Parcels and goods.
	Jalalpur . .	Malipur . .	1 January 1958 .	
	Fatehabad . .	Bhattu . . .	15 March 1958 .	
	Pauri . . .	Kotdwara . .	1 March 1958 .	
	Mangalore Town .	Roorkee . .	20 March 1958 .	



NEW STATION, JUBBULPORE—CENTRAL RAILWAY

A VIEW OF THE III CLASS BOOKING OFFICE RECENTLY CONSTRUCTED AT ANANDPUR SAHEB—NORTHERN RAILWAY



Railway	Name of out-agency	Serving station	Date of opening	Traffic for which opened
North Eastern	Rudrapur	Lalkua and Kichha	15 May 1957	Parcels and goods.
Southern	Jammalamadugu	Muddanuru	15 May 1957	Parcels and goods.
	Nargund	Annigeri	15 September 1957	
	Chennimalai	Ingur	18 September 1957	
	Guledgarh	Guledgud Road	1 October 1957	
	Talikota	Telgi	7 October 1957	
	Vita	Karad	17 October 1957	
	Gangawati	Ginigera	1 November 1957	
	Ratnagiri	Kolhapur	1 November 1957	
	Ettaiyapuram	Kovilpatti	6 November 1957	Passenger, luggage, parcels and goods.
	Coondapur	Mangalore	25 November 1957	Parcels and goods.
	Gudalur	Nilambur Road	25 November 1957	
	Virajpet West	Tellicherry	1 March 1958	
	Dharampuri	Morappur	30 June 1957	Passenger, luggage, parcels and goods.
	Razol	Narasapur	1 October 1957	Parcels and goods.

A city booking office was opened at Morar Cantt. (Central Railway) with effect from 30 December 1957 for booking only III Class and III Class (Air-conditioned) passengers.

With effect from 1 March 1958, the town booking office at Madurai was opened for outward traffic in goods smalls. Prior to 1 March 1958, this booking office was open for passenger and parcel traffic only; on and from this date, the system of collection and forwarding of goods traffic also was introduced.

The town booking office at Erode was closed and the system of street delivery service of parcels and goods traffic was also discontinued from 5 September 1957.

The following out-agencies were closed during the year under review:

Railway	Name of out-agency	Serving Station	Date from which closed
Southern	Periyakulam	Kodaikanal	5 June 1957
	Gajendragad	Gadag	1 July 1957
Western	Shahpura	Mandal	1 October 1957
Eastern	Banka Road	Barahat	1 March 1958

174. Waiting Rooms and Waiting Halls.—Besides the improvements to the existing station accommodation, new waiting rooms for Upper class passengers and waiting halls for Class III passengers were constructed at a number of stations, briefly summarized below:

Central Railway.—Waiting halls were provided at Kopargaon, Yeola, Morena and six other stations while at four other stations the work was in progress at the close of the year. Waiting rooms were also provided at Kopargaon, besides Khurai and Katni stations. Additions, alterations and improvements to the existing waiting rooms and/or waiting halls were carried out at eleven stations, while at Dhamangaon, Kazipet, Gwalior, Parasia and six other stations the works were in progress.

Eastern Railway.—New waiting halls were provided at Bhadreswar, Belur, Chinsura and five other stations, while the waiting halls at Ballyghat and Pathardihi were extended.

The existing waiting rooms at Berhampore Court, Giridih and Ranaghat were improved.

Northern Railway.—Waiting halls were provided at Bahjoi, Seohara, Mitawali and eighteen other stations, and the work was in progress at Behta Gokul, Matlabpur and Rathdhana stations. Also existing waiting halls at

five stations were extended. Similar work was in progress at Bhiwani, Sadulpur, Jaitu and five other stations.

Waiting rooms were provided at Bahjoi, Raja-ka-Sahaspur and three other stations while the work was in progress at seven stations. Waiting rooms for merchants in goods sheds were provided at Sri Ganga Nagar, Ayodhya, Dehra Dun and three other stations. Similar work was in progress at Hapur, Bareilly and Hardoi.

North Eastern Railway.—Waiting halls were provided at Munderwa, Azamgarh, Gyanpur Road, Purnea Junction and twelve other stations and the work was in progress at eighteen other stations. Waiting halls at Sadat and Puranigudam were also extended.

Waiting rooms at Purnea (Ladies), Bhatni, Deoria Sadar and at nine other stations were provided. Similar works were in progress at Farukhabad, Diphu, Khatema (Ladies), Ranipatra and eleven other stations. Works of providing waiting rooms for merchants in goods shed at nine stations were in progress.

Southern Railway.—Waiting halls at Gudvancheri and Chinna Salem were provided.

Waiting rooms at Bapatla, Padugupadu, Kadiri and Madanapalle Road were provided. Third class waiting rooms for ladies were provided at Trichur and Calicut.

South Eastern Railway.—Waiting halls were provided at Chicholi and Gujjangivalasa, while similar work was in progress at Mohuda, Bhusandpur, Bilaspur, Rajim and ninteen other stations.

Waiting rooms were provided at Durg, Raj-Nandgaon, Balaghat, Kantabanji, Chakradharpur and Nawapara Road, while the works were in progress at eight other stations.

Western Railway.—Waiting halls were provided at Ankleswar, Bhairongarh, Gulabpura and eleven other stations. Existing waiting halls at Balwa, Hamirgarh, Kavi and four other stations were extended.

Upper class waiting room was provided at Amalner while at Broach a waiting room for traders was provided.

175. Additional platforms and sheds.—During the year under review, considerable improvements were made in regard to the provision of additional platforms, extensions and improvements to the existing ones in respect of their length, surfacing, etc. In addition, sheds and covers were provided on a number of platforms to provide shelter from sun and rain. A summary of the improvements carried out on different railways is given below:

Central Railway.—Raising and/or lengthening or widening of platforms was carried out at Karjat, Khurai, Pachora, Parasia and ten other stations, while similar work was in progress at thirteen stations.

Additional platforms were provided at Kurduwadi and Raja-ki-mandi. Similar work was in progress at Kurla and Sholapur.

Cover over platforms was provided at Faridabad, Katni, Pachora and sixteen other stations while similar work was in progress at Wardha, Basar, Savda and seven other stations.

Surfacing of platforms was completed at Karjat, Madan Mahal, Raver and nine other stations. Similar works were in progress at nine more stations.

Eastern Railway.—New platforms were provided at Gobardanga, Lalgola, the newly opened Barrackpore Halt and Sasan Road stations. Platforms at Agarpara, Banahi, Bagnapara, Badkulla and seventeen other stations were raised. Extension to platforms at twenty stations were carried out. Surfacing of platforms was done at Bhagwangola, Dum Dum Junction Habra and ten other stations.

Covered sheds were provided at Azimganj, Baranagar Road, Baruipara, Kiul and eleven other stations. The covered sheds at Barakar, Bhadreswar and Bandel were extended.

Northern Railway.—Rail level platforms were provided at Saktesgarh and Ramganga stations. Medium level platforms were provided at ten stations. High level platforms were provided at four stations and additional high level platforms were provided at Ludhiana, Napasar, Gogameri and Nohar.

Existing platforms were extended or widened at Shahabad, Markanda, Sudsar, Gidderbaha and five other stations. Similar work was in progress at two stations. Works of raising platforms were in progress at Sri Ganga Nagar, Ellenabad, Kalayat and seventeen other stations.

Platform sheds were provided at Mitawali, Kalka, Rupar, Hansi and seventeen other stations. Similar work was in progress at three stations.

North Eastern Railway.—Cover over platforms was provided at Fatehgarh, Saharsa, Mansi and thirty-three other stations. Similar work was in progress at Lar Road, Shahganj, Diphu and five other stations.

Work of providing additional platforms at Ramgarhwa, Sitalpur and Kishanganj was in progress.

Southern Railway.—A high level platform was provided at Ammanabrolu. A rail level island platform was provided at Lalgudi.

Covers over platforms were provided at Mangalpadi, Ullal, Budalur, Salem Town and ten other stations.

South Eastern Railway.—Work of providing a new platform at Titilagarh was in progress.

Platform covers were provided at Rairangpur, Galudih and Sprikakulam Road. Similar work was in progress at Ranchi, Muri, Puri, Sini, Varanasi and twenty-three other stations.

Western Railway.—New island platforms were provided at Andheri, Khar, Santa Cruz and Vile Parle. Extension of platforms was carried out at Ajmer, Bayana, Bharatpur, Somesar and thirteen other stations. Similar work was in progress at Achnera. Platforms were asphalted at Alwar, Anjar, Deesa, Gondal and twelve other stations.

Cover over platforms was provided at Alwar, Bombay Central (local), Grant Road, Nagda, Ratlam and ninteen other stations. Similar work was in progress at eight stations.

176. Catering arrangements.—With a view to setting up an adequate standard and to induce the contractors to improve their service, departmental catering was extended during the year under review to a few more stations on all the zones, including services on certain trains.

It is now proposed to concentrate on consolidation of departmental catering wherever it has been introduced.

Reports received from the travelling public and the Railway Administrations indicate that the changeover from contract to departmental catering so far effected has been well received.

The quantities of cooked rice and chapaties served according to the menu of the standard Indian style meals were reduced from 20 ozs. to 16 ozs. in the case of full rice meal and from 10 ozs. to 8 ozs. in the case of full chapati meal, as the quantities were found to be somewhat liberal and resulting in wastage of food.

Sustained attention continued to be paid by the Railway Administrations to ensure that the quality of food served as well as the standard of service, both in the departmentally run catering establishments and others run by the contractors, were of the requisite standard. The Catering Supervisory Committees, consisting of non-officials from well-known social service organizations continued to function on all Railways. The members of these Committees, who undertook tours of inspection of catering establishments, suggested ways and means for improving catering arrangements on Railways.

177. Supply of drinking water.—Adequate arrangements for the supply of cool and wholesome drinking water to passengers at stations and on trains continued to receive the special attention of the Railway Administrations.

During summer months, the normal strength of watermen at stations was substantially increased.

Provision of electric water coolers at stations for which orders were already placed was in progress. Due to difficult foreign exchange position, however, further provision of water coolers on Railways had to be held in abeyance.

178. Action taken to maintain cleanliness of station premises.—The cleanliness and sanitation drives were continued on the Railways, and the necessity for maintaining a high standard of sanitation and cleanliness in station premises was impressed on the staff. In this connection, the scheme of award of half-yearly cash prizes and certificates for the best maintained stations has proved to be an incentive for healthy competition, among the staff working at various stations of each Zonal Railway.

Through the medium of social education, exhibition of posters, sign boards, appropriate films at certain important stations and through announcements on loud speakers, wherever provided, the travelling public is also exhorted to co-operate with the Administration in maintaining the station premises clean and tidy.

179. Steps to alleviate overcrowding in trains.—The progressive increase in passenger train mileage achieved since the beginning of the First Five Year Plan is indicated below:

1951-2	105 millions	First Five Year plan
1952-3	107 ,,	
1953-4	111 ,,	
1954-5	114 ,,	
1955-6	116 ,,	
1956-7	119 ,,	Second Five Year plan
1957-8	121 ,,	

Removal of overcrowding is necessarily dependent upon availability of additional coaches and locomotives and line capacity on sections where this is a limiting factor. During the Second Five Year Plan, additional passenger transport capacity of 23 per cent has been provided for on the Metre gauge against 10 per cent on the Broad gauge, to meet the demands of increasing traffic and also to alleviate overcrowding to the extent possible.

Census of occupation of trains in third class, section by section, is periodically taken by the Railways to ascertain the extent of overcrowding on different trains and over different sections. The position as revealed by the census taken during 1957-8 as compared to 1955-6, was that overcrowding on the Broad gauge could not be reduced and the additional services have only catered for the additional traffic. On the Metre gauge, however, there has been an appreciable decrease in overcrowding from 30 per cent to 20 per cent.

As more resources cannot be diverted for easing of overcrowding without prejudice to the movement of vital goods traffic, the position in respect of overcrowding is not likely to improve to any appreciable extent during the Second Five Year Plan period.

180. Social education.—Social education campaign continued to be carried on through the media of posters, films and loudspeakers.

The running of the cinema-cum-buffet car introduced on an experimental basis in the previous year on the Delhi-Howrah Janata Expresses between Jhajha and Kanpur, was discontinued from 1 October 1957.

One rake of the Air-conditioned Express trains running between Howrah-New Delhi and New Delhi-Madras has been fitted with public address system which is being operated on an experimental basis from 24 December 1957.

181. Actual expenditure under the detailed heads on passengers and other Railway users' amenities.—The statement below gives the actual expenditure during 1957-8 on passengers and other Railway users' amenities:

ACTUAL EXPENDITURE OF PASSENGERS AND OTHER RAILWAY USERS' AMENITIES

(Figures in thousands of Rupees.)

Heads of expenditure	Central	Eastern	Northern	North Eastern	Southern	South Eastern	Western	Total
Water supply at stations, etc.	4,00	68	3,80	2,91	2,21	4,82	3,51	21,93
Retiring rooms and Waiting accommodation, etc.	4,07	84	5,36	1,29	7,12	1,60	2,53	22,81
Refreshment rooms and Vendor's stalls of all description	1,30	48	2,04	64	2,01	52	48	7,47
Provision or improvement of latrines	81	25	1,32	1,07	3,47	64	1,15	8,71
Miscellaneous improvements *viz.* provision of seats, hedges, shade trees, etc.	4,08	2,78	2,91	66	59	3,10	14,61	28,73
Extending, raising, widening, surfacing, covering or other improvements including provision of seats plantation, etc., at Platforms	11,83	8,97	12,03	13,98	14,12	4,51	14,06	79,50
Provision of new overbridges, sub-ways and extensions	3,07	38	3,24	1,84	6	10	1,86	10,55
Provision of bathing facilities at stations	4	—	7	10	38	7	10	76
Improvement of approaches and circulating areas at stations including improved lighting	3,60	8	1,89	76	2,20	—	3,41	11,94
Improvement to existing carriages such as fans, etc.	11,24	9,65	9,23	7,54	8,64	3,09	12,24	61,63
Improved lighting and provision for fans on station platforms, or in waiting halls and vendor's stalls	2,45	4,16	3,30	3,13	6,27	1,22	1,95	22,48
Washable aprons on passenger platform lines	4	—	69	22	2	4	—	1,01
Opening of new flag stations or conversion of halts into flag stations	26	3	98	1,10	47	—	2,93	5,77
Exhibition of sheet time-tables at stations	—	—	1	2	1	—	1	5
Works coming under all these heads provided in connection with melas	(—) 63*	—	7	—	(—) 1	—	5	(—) 52
Any other works considered essential for meeting the requirements of Railway users	9,44	1	2,81	5,01	8,52	96	12,41	39,16
Conversion of Narrow gauge lines into Metre or Broad gauge ones (estimates sanctioned before 1-4-1956)	—	—	—	6	—	—	1,88	1,94
Total	55,60	28,31	49,75	40,33	56,08	20,67	73,18	3,23,92

*Includes credit of Rs. 84 thousands on account of released material from works provided for Sinhastha fair at Nasik.

CHAPTER XI

ACCIDENTS

182. Major Accidents.—The details of major accidents which occurred during the year are given below:

On 2 June 1957, while Bandra-Bombay Electric Multiple Unit Suburban Train No. B12 Up was standing at the semi-automatic gate signal near Sewri station on the Harbour Branch Electrified Section of the Central Railway, the following train No. M22 Up Mankhurd-Bombay Electric Multiple Unit Train proceeding from Wadala, collided with the rear of B12 Up. The rearmost coach of B12 Up and the first three coaches of M22 Up were damaged. Twenty-three persons were killed and sixty-four were injured. The approximate cost of damage to rolling-stock and permanent way was Rs. 47,770. The accident was caused by non-observance of the procedure prescribed for passing automatic signals at danger.

On 19 August 1957, while shunting was being performed on No. 1221 Up Express Goods train at Palasa station on the East Coast Main Line Section of the South Eastern Railway, a bogie rail truck loaded with angle irons, rolled back down the gradient into the Palasa-Pundi block section and collided with No. 46 Down Janata Express which was approaching Palasa Station from Pundi. The engine and the third-luggage-brake coach next to it on the Janata Express and the bogie rail truck suffered damages. Four persons were killed and seventeen were injured. The approximate cost of damage to the engine, rolling-stock and permanent way was Rs. 96,400. The accident was caused by non-observance of rules prescribed for shunting at stations particularly those situated on gradients.

On 23 November 1957, while No. 1 Down Bombay-Calcutta Mail was running between Padali and Asvali stations on the Igatpuri-Bhusaval section of the Central Railway, its engine and 8 coaches next to it derailed; four of the derailed coaches capsized. Nine persons were killed and fifty four were injured ; in addition, fifty three persons sustained injuries of a trivial nature. The approximate cost of damage to engine, rolling-stock and permanent way was Rs. 1,38,080. In view, however, of the seriousness of the accident, the Government of India appointed a Commission of Enquiry to—

(i) make an enquiry into the causes of the accident and for that purpose take such evidence as may be necessary;

(ii) state its findings as to the causes of the accident and as to the person or persons, if any, responsible therefor; and

(iii) suggest safeguards against similar accidents in future.

The Commission consisted of—

(i) Justice G. D. Khosla, I.C.S., a Judge of the Punjab High Court, as Chairman, and

(ii) Dr. P. Subbarayan, M.P., and

(iii) Shri J. N. Nanda, Retired General Manager, of *ex*-Nizam State Railway,

as Members.

The Commission submitted its report on 24 January 1958. The findings of the Commission is that the accident was ' the result of a deliberate action of sabotage committed by some person or persons unknown '.

On 1 January 1958, while No. 45 Up Delhi-Pathankot Janata Express was running through Mohri Station on the Delhi-Ambala section of the Northern Railway, it entered the same line on which No. 2 Down Ambala-Delhi Passenger train was already standing and collided head-on with it. The engine of both the trains derailed and capsized and two bogies next to each of the two engines were smashed; the third coach behind the engine of 45 Up derailed. Thirty six persons were killed and eighty eight were injured. The approximate cost of damage to the engine, rolling-stock and permanent way, etc., was Rs. 3,49,300.

In view of the seriousness of the accident, the Government of India appointed a Commission of Enquiry to—

(i) make an enquiry into the causes of the accident and for that purpose take such evidence as may be necessary;

(ii) state its findings as to the causes of the accident and as to the person or persons, if any, responsible therefor; and

(iii) suggest safeguards against similar accidents in future.

The Commission consisted of—

(i) Justice B. N. Nigam, I.C.S., a Judge of the Allahabad High Court, as Chairman and

(ii) Shri Feroze Gandhi, M.P., and

(iii) Shri J. N. Nanda, retired General Manager, of *ex*-Nizam State Railway,

as Members.

The Commission submitted its report on 27 February 1958. As a case in connection with the accident is *sub judice*, the findings of the Commission could not yet be published.

On 26 February 1958, No. S241 Up Local Passenger train, while leaving Sonarpur station for Calcutta, was passing from line No. 3 to Up Main Line across the Down Main line. Meanwhile, S370 Down Local Passenger, coming from Calcutta, ran into the coach fourth from the engine on No. S241 Up. The engine of the Down train derailed and the third, fourth and fifth coaches next to the engine of S241 Up were damaged. Five persons were killed and forty seven were injured. The approximate cost of damage to engine, rolling-stock and permanent way was Rs. 44,100. The accident was caused by non-observance of the procedure prescribed for passing defective signals.

183. Review of accident statistics.—The following statement analyses under certain principal heads the accidents which occurred during the last two years. A statement showing the character and extent of accidents in greater detail for each railway will be found in Statement 41 of Volume II of this Report.

ACCIDENTS DURING 1956-7 AND 1957-8 CLASSIFIED UNDER PRINCIPAL HEADS

ALL RAILWAYS (INCLUDING NON-GOVERNMENT RAILWAYS)

	1956-7	1957-8
(1) Accidents due to failure of engines, owing to faulty material, workmanship and operation arising from the working of the running staff	2,220	2,066
(2) Accidents due to failure of couplings and draft gear	1,671	1,740
(3) Running over cattle	1,840	1,666
(4) Derailments not involving passenger trains	1,163	1,224
(5) Accidents due to failure of engines owing to faulty design, material and workmanship in the mechanical department	870	761
(6) Fires in trains, at stations and bridges	262	339
(7) Derailments of passenger trains	207	216
(8) Trains running into road traffic at level crossings	123	161
(9) Accidents due to other rolling-stock failures	156	157
(10) Collisions involving goods trains or goods vehicles	87	132
(11) Running over obstructions (other than those included under 'train-wrecking' 'attempted train-wrecking' and 'trains running into road traffic at level crossings')	85	89
(12) Attempted train-wrecking	78	77
(13) Flooding of portions of permanent way	278	68
(14) Broken rails	53	43
(15) Collisions involving passenger trains	23	30
(16) Landslips	23	18
(17) Passenger trains running in the wrong direction through points but not derailed	15	17
(18) Accidents due to failure of axles	7	5
(19) Failure of bridges, tunnels, etc.	3	3
(20) Collisions between light engines	4	2
(21) Accidents due to failure of tyres and wheels	5	2
(22) Train-wrecking	6	1
(23) Accidents due to failure of brake apparatus	—	—
(24) Miscellaneous	364	351
TOTAL	9,543	9,168

The percentage of the accidents for important categories to total are given below in the descending order:

	Per cent
Accidents due to failure of engines owing to faulty material, workmanship and operation arising from the working of the running staff	22
Accidents due to failure of couplings and draft gear	19
Running over cattle	18
Derailments not involving passenger trains	13
Accidents due to failure of engines owing to faulty design, material and workmanship in the Mechanical Department	8
Fires in trains, at stations and bridges	4
Derailments of passenger trains	2
Accidents due to other rolling-stock failures	2
Trains running into road traffic at level crossings	2

Accidents in railway workshops accounted for 23 deaths and injuries to 25,588 railway servants or an increase of 12 in the former and of 928 in the latter as compared with the previous year.

The number of passengers, railway servants and other persons killed and injured in accidents on Indian Railways exclusive of casualties in railway workshops during 1957-8 as compared with the previous year may be seen from the table below:

NUMBER OF PERSONS KILLED AND INJURED IN ACCIDENTS ON ALL RAILWAYS DURING 1956-7 AND 1957-8 (INCLUDING NON-GOVERNMENT RAILWAYS)

Classification	Killed		Injured	
	1956-7	1957-8	1956-7	1957-8
A.—Passengers—				
(a) In accidents to trains, rolling-stock, permanent way, etc.	276	77	348	504
(b) In accidents caused by movement of trains and railway vehicles exclusive of train accidents.	364	354	3,131	3,057
(c) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	5	4	142	122
TOTAL	645	435	3,621	3,683
B.—Railway servants—				
(a) In accidents to trains, rolling-stock, permanent way, etc.	23	18	213	219
(b) In accidents caused by the movement of trains and railway vehicles exclusive of train accidents.	187	222	6,787	7,133
(c) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	43	43	19,292	20,732
TOTAL	253	283	26,292	28,084
C.—Other than passengers and railway servants—				
(a) In accidents to trains, rolling-stock, permanent way, etc.	49	49	180	184
(b) In accidents caused by movement of trains and railway vehicles exclusive of train accidents.*	218	263	147	178
(c) In accidents on railway premises in which movement of trains, vehicles, etc., was not concerned.	35	53	130	138
TOTAL	302	365	457	500
GRAND TOTAL	1,200	1,083	30,370	32,267

*Excluding trespassers and suicides, details of which are set out below:

	Killed		Injured	
	1956-7	1957-8	1956-7	1957-8
Trespassers	3,511	3,677	1,933	2,039
Suicides	343	341	38	36
TOTAL	3,854	4,018	1,971	2,075

In accidents to trains, rolling-stock and permanent way, even though there is a decrease in the number of passengers killed, the number injured increased by 156 due to heavy casualties in the major accidents described in the preceding paragraph on 'Major Accidents'.

In accidents caused by movement of trains and railway vehicles exclusive of train accidents—

(i) the number of railway servants killed and injured increased by 35 and 346 respectively due mainly to the undermentioned causes:—

While coupling or uncoupling vehicles, while attending to or by the failure of machinery, etc., of engines in steam, while walking, crossing or standing on the line on duty or on way home or to work, while working on sidings and other miscellaneous causes;

(ii) the number of persons other than passengers and railway servants killed and injured increased by 45 and 31 respectively due to an increase in casualties while passing over level crossings and other miscellaneous causes.

The increases in some of the other items are slight.

The following statement shows the number of passengers killed and injured in train accidents only, i.e., collisions, derailments, etc., during the last five years as compared with the number originating:

NUMBER OF PASSENGERS KILLED AND INJURED IN TRAIN ACCIDENTS ON ALL RAILWAYS FROM 1953-4 TO 1957-8 (INCLUDING NON-GOVERNMENT RAILWAYS)

Year	No. of passengers originating (in million)	Killed		Injured	
		Number†	Per million passengers	Number†	Per million passengers
1953-4	1,220	128	0·10	381	0·31
1954-5	1,261	147	0·12	303	0·24
1955-6	1,297	16	0·01	266	0·20
1956-7	1,383	276	0·20	335	0·24
1957-8	1,431	77	0·05	504	0·35

† Excludes train-wrecking and attempted train-wrecking.

On the Government Railways, the main causes for the accidents to railway servants caused by the movement of trains and railway vehicles exclusive of train accidents, are analysed in the following table:

CLASSIFICATION OF ACCIDENTS TO RAILWAY SERVANTS ON GOVERNMENT RAILWAYS

Cause	Killed		Injured	
	1956-7	1957-8	1956-7	1957-8
(1) Misadventure or accidental	182	209	6,653	7,019
(2) Want of caution or misconduct on the part of the injured person	5	11	105	83
(3) Want of caution or breach of rules, etc., on the part of railway servants other than the persons injured	..	..	21	19
(4) Defective apparatus, appliances, etc., or want of sufficient appliances, safeguards, etc.	..	..	..	..
TOTAL	187	220	6,779	7,121

184. Appointment of Claims Commissioners.—During the year under review, four major accidents occurred, viz., those to: (1) M22 Up Mankhurd-Bombay and B12 Up Bandra-Bombay Local trains near Sewri station on the Central Railway on 2 June 1957; (2) 1 Down Bombay-Calcutta Mail between Padali and Asvali stations on the Igatpuri-Bhusaval section of the Central Railway on 23 November 1957; (3) 2 Down Passenger Train and 45 Up Delhi-Pathankot Janata Express at Mohri station on the Ambala Cantt.-Karnal-Delhi section of the Northern Railway on 1 January 1958; (4) S241 Up Sealdah-Sonarpur and S370 Down Canning-Sealdah Local trains near Sonarpur station of Eastern Railway on 26 February 1958.

The claims arising out of the first two accidents were dealt with by one and the same Claims Commissioner on the recommendation of the Bombay Government.

The two other Claims Commissioners who were appointed to deal with the claims arising out of the third and fourth accidents are still functioning.

The position at the end of the year was that out of 67 claims received by the Claims Commissioner, Sewri accident, 4 claims were rejected, 61 claims were decreed for Rs. 1,41,699.50 and 2 were outstanding; out of 69 claims received by the Claims Commissioner for the Igatpuri accident 4 were dismissed and in 40 other cases decrees amounting to Rs. 85,542·98 were awarded, 25 claims remaining outstanding; the Claims Commissioner for Sonarpur accident did not receive any claim for compensation; the Claims Commissioner for Mohri accident received 49 claims amounting to Rs. 8,39,498·76 and these were under disposal when the financial year 1957-8 closed.

APPENDIX A

Resolution regarding the separation of Railway from General Finance, adopted by the Legislative Assembly on 20 September 1924 and Convention Resolutions of 1943, 1949 and 1954.

"This Assembly recommends to the Governor General in Council that in order to relieve the general budget from the violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry out a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State on Railways.

(1) The railway finances shall be separated from the general finances of the country and the general revenues shall receive a definite annual contribution from railways which shall be the first charge on the net receipts of railways.

(2) The contribution shall be based on the capital at charge and working results of commercial lines, and shall be a sum equal to one per cent on the capital at charge of commercial lines (excluding capital contributed by companies and Indian States) at the end of the penultimate financial year *plus* one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that, if in any year railway revenues are insufficient to provide the percentage of one per cent on the capital at charge surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good.

The interest on the capital at charge of, and the loss in working, strategic lines shall be borne by general revenues and shall consequently be deducted from the contribution so calculated in order to arrive at the net amount payable from railway to general revenues each year.

(3) Any surplus remaining after this payment to general revenues shall be transferred to a railway reserve, provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues.

(4) The railway reserve shall be used to secure the payment of the annual contribution to general revenues; to provide, if necessary, for arrears of depreciation and for writing down and writing off capital; and to strengthen the financial position of railways in order that the services rendered to the public may be improved and rates may be reduced.

(5) The railway administration shall be entitled, subject to such conditions as may be prescribed by the Government of India, to borrow temporarily from the capital or from the reserves for the purpose of meeting expenditure for which there is no provision or insufficient provision in the revenue budget subject to the obligation to make repayment of such borrowings out of the revenue budgets of subsequent years.

(6) A standing Finance Committee for Railways shall be constituted consisting of one nominated official member of the Legislative Assembly who should be chairman and eleven members elected by the Legislative Assembly from their body. The members of the Standing Finance Committee for Railways shall be *ex-officio* members of the Central Advisory Council, which shall consist, in addition, of not more than one further nominated official member, six non-official members selected from a panel of eight elected by the Council of State from their body and six non-official members selected from a panel of eight elected by the Legislative Assembly from their body.

The Railway Department shall place the estimate of railway expenditure before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demand for grants for railways and shall, as far as possible, instead of the expenditure programme revenue show the expenditure under a depreciation fund created as per the new rules for charge to capital and revenue.

(7) The railway budget shall be presented to the Legislative Assembly if possible in advance of the general budget and separate days shall be allotted for its discussion, and the Member in charge of Railways shall then make a general statement on railway accounts and working. The expenditure proposed in the railway budget, including expenditure from the depreciation fund and the railway reserve, shall be placed before

the Legislative Assembly in the form of demands for grants. The form the budget shall take after separation, the detail it should give and the number of demands for grants into which the total vote shall be divided shall be considered by the Railway Board in consultation with the proposed Standing Finance Committee for Railways with a view to the introduction of improvements in time for the next budget, if possible.

(8) These arrangements shall be subjected to periodic revision but shall be provisionally tried for at least three years.

(9) In view of the fact that the Assembly adheres to the resolution passed in February 1923, in favour of State management of Indian Railways, these arrangements shall hold good only so long as the East Indian Railway and the Great Indian Peninsula Railway and existing State-managed railways remain under State management. But if in spite of the Assembly's resolution above referred to Government should enter on any negotiations for the transfer of any of the above railways to Company management such negotiations shall not be concluded until facilities have been given for a discussion of the whole matter in the Assembly. If any contract for the transfer of any of the above railways to company management is concluded against the advice of the Assembly, the Assembly will be at liberty to terminate the arrangements in this Resolution.

Apart from the above convention this Assembly further recommends—

(i) that the railway services should be rapidly Indianised, and further that Indians should be appointed as Members of the Railway Board as early as possible, and

(ii) that the purchases of stores for the State Railways should be undertaken through the organization of the Stores Purchase Deparment of the Government of India."

Convention Resolution of 1943

The Legislative Assembly on 2 March 1943 passed the following resolution:—

"Whereas it has been found that the Convention, which was adopted under the Assembly Resolution, dated 20 September 1924, and which was intended to relieve the General Budget from violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry on a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State, has not achieved these objects, this Assembly recommends to the Governor General in Council that:

(i) for the year 1942-3 a sum of Rs. 2,35,32 thousand shall be paid to general revenue over and above the current and arrear contribution due under the Convention,

(ii) from 1 April 1943, so much of the Convention as provides for the contribution and allocation of surpluses to general revenues shall cease to be in force,

(iii) for the year 1943-4, the surplus on commercial lines shall be utilised to repay any outstanding loan from the depreciation fund and thereafter be divided 25 per cent to the railway reserve and 75 per cent to general revenues, the loss, if any, on strategic lines being recovered from General Revenues, and

(iv) for subsequent years and until a new convention is adopted by the Assembly, the allocation of the surplus on commercial lines between the railway reserve and general revenues shall be decided each year on consideration of the needs of the railways and general revenues, the loss, if any, on strategic lines being recovered from general revenues."

Convention Resolution of 1949

The Constituent Assembly of India (Legislative) on 21 December 1949 passed the following resolution:

"This Assembly, after considering the recommendations of the Committee appointed by it in April 1949 to review the Convention relating to the separation of railway from general finance which was adopted under the Assembly Resolution, dated 20 September 1924, and in supersession of that and all other previous resolutions on the subject, resolve:

(1) that railway finance shall continue to remain separated from general finance;

(2) that the general tax-payer shall have the status of the sole shareholder in the railway undertaking;

(3) that on the capital invested out of general revenues in the railway undertaking as computed annually, general revenues shall receive only a fixed annual dividend;

(4) that for a period of five years, commencing from 1950-1 the annual dividend, shall be a sum calculated at the rate of 4 per cent on the capital invested provided that no dividend shall be payable on the capital invested out of general revenues in unremunerative strategic lines;

(5) that a Committee of the House shall review the rate of dividend towards the end of the aforesaid period and suggest for the years following it any adjustment considered necessary, having regard to the revenue returns of the railway undertaking, the average borrowing rate of government and any other relevant factors;

(6) that the existing railway reserve shall be renamed the Revenue Reserve Fund and utilised primarily for maintaining the agreed payments to general revenues and for making up any deficit in the working of the railways;

(7) that a Development Fund shall be constituted for financing expenditure for the following purposes:

(a) passenger amenities,

(b) labour welfare, and

(c) railway projects which are necessary, but unremunerative;

(8) that for meeting the cost of replacement and renewal of assets, the Depreciation Reserve Fund shall receive, for the next five years, a minimum contribution of Rs. 15 crores per annum chargeable to the working expenses of the undertaking;

(9) that the railway surplus shall be available for distribution amongst the Revenue Reserve Fund, the Development Fund, and the Depreciation Reserve Fund to the extent the last-named needs strengthening over and above the minimum annual contribution;

(10) that a Standing Finance Committee for Railways and a Central Advisory Council for Railways shall be constituted in the manner laid down in the motion adopted by this House on 23 March 1949;

(11) that the annual estimates of railway expenditure shall be placed before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demands for grants for railways by the Assembly; and

(12) that the Railway Budget shall be presented to the House, if possible, in advance of the general budget and separate days shall be allotted for its discussion and the Minister for Railways shall then make a general statement on railway accounts and working. The expenditure proposed in the Railway Budget, including the appropriation to the Depreciation Reserve Fund, the Development Fund, and the Revenue Reserve Fund shall be placed before the House in the form of demands for grants. The form the budget shall take, the details it shall give, and the number of grants into which the total vote shall be divided, shall be drawn up by the Ministry of Railways in consultation with the Standing Finance Committee for Railways.

2. This Resolution shall come into force from 1 April 1950."

Convention Resolution of 1954

The following Resolution was passed by the Lok Sabha at its sitting on Thursday, the 16 December 1954:

Resolution

"That this House approves the recommendations contained in the Report of the Committee appointed to review the rate of dividend at present payable by the Railway Undertaking to General Revenues as well as other ancillary matters in connection with the separation of Railway Finance from General Finance, which was presented to Parliament on 30 November 1954."

The Resolution was adopted in the Rajya Sabha in the following form on the 21 December 1954:

"That this House approves the recommendations contained in the Report of the Committee appointed to review the rate of dividend at present payable by the Railway Undertaking to General Revenues as well as other ancillary matters in connection with the separation of Railway Finance from General Finance, which was presented to Parliament on 30 November 1954."

2. The summary of the principal recommendations of the Railway Convention Committee, 1954, as contained in its report, dated 30 November 1954 are as follows:

(1) It would be advantageous from all points of view to express the rate of dividend in terms of a percentage on the Capital-at-charge and the amount paid annually through a fixed rate of dividend inclusive of the element of interest.

(2) The present rate of dividend should remain unaltered for another period of 5 years. However, the Committee feel that in the matter of calculation of the Capital-at-charge and arriving at the total of the dividend payable, some minor adjustments are called for.

(3) The element of over-capitalization should be precisely assessed by the Railway Board and on that portion of the loan capital, the Railways shall pay the dividend at the rate equivalent to the average borrowing rate charged by the Government of India to Commercial Departments from year to year.

(4) The dividend on the Capital-at-charge of new lines should be computed at a lesser rate, *viz.*, the average borrowing rate charged to Commercial Departments and a moratorium should be granted in respect of the dividend payable on the Capital invested on the new lines during the period of construction and upto the end of the fifth year of their opening for traffic, the deferred amount being repaid from the sixth year onwards in addition to the current dividend out of the net income of the new lines.

(5) The annual contribution to the Depreciation Reserve Fund which had been maintained at a level of Rs. 30 crores during the five year period ending the 31 March 1955 should be raised to Rs. 35 crores during the next quinquennium.

NOTE.—The contribution to this Fund for five years commencing from 1955-6 was later increased from Rs. 35 crores to Rs. 45 crores with the approval of the Parliament.

(6) The Committee recognise that the appropriation to the Development Fund and the solvency of the Fund are dependent on the availability and the size of the surplus, while the provision for depreciation should be based on the life of the assets, and their replacement on the actual conditions which cannot be deferred, if their earning potential is to be maintained. They, therefore, feel that the replacement of these assets should bear no relationship with the ultimate loss or gain of the Undertaking but should be met out of the Depreciation Reserve Fund.

(7) The Committee are in favour of extending the scope of the Development Fund so as to include amenities for all "users of Railway transport", such as improvement to goods sheds, loading and unloading platforms, waiting sheds for the trading public, etc., which they consider as absolutely essential and recommend the continuance of the present practice of earmarking a minimum of Rs. 3 crores per annum on this account.

(8) The Railway Board should look into the matter of assessment of rent realised for Railway quarters and ensure that a return of rent more commensurate with the capital cost is obtained on all residential buildings built for Class III staff.

(9) The Committee are anxious that the primary amenity which the Railways must provide is that of safety of travel. They, therefore, desire that the expenditure on Safety Works should be given due priority in any allocations of funds from the Development Fund over the next few years.

(10) The Committee agree with the Railway Board that the distinction of splitting up of expenditure on works between Development Fund and Revenue for the purpose of allocation is unnecessary. The allocation should be determined as in the case of other works according to the total outlay expected on each work. The expenditure on unremunerative operating improvement works costing more than Rs. 3 lakhs each should be charged entirely to Development Fund.

(11) The cost of construction of all new lines when decided to be constructed might be debited to Capital from the very beginning.

(12) In the event of the Development Fund not being in a position to meet the programme of expenditure chargeable to that Fund from its own resources, money should be advanced from General Revenues to the Railways for utilisation on those Projects or Works which are of a developmental nature. Such advances should be treated as Temporary Loans to the Railways and will not be added to the Capital-at-charge on which 4 per cent dividend is payable annually. The Railways will pay interest on this loan to General Revenues at the average borrowing rate chargeable to Commercial Departments. It shall, however, be open

to the Railways to repay this loan in instalments, if necessary, from accretions to the Development Fund in more prosperous years and thus liquidate the debt and the interest liability thereon.

(13) In view of the fact that the annual loss on working of strategic lines is insignificant, the Committee consider that the suggestion made by the Railway Board whether the operating loss on strategic lines should not be deducted from the contribution calculated for payment to General Revenues on non-strategic lines should not be pressed for a decision now, but brought up before the next Convention Committee, if the loss on this account is sizable.

(14) The criterion for classifying a project as remunerative should be 5 per cent.

(15) While the Committee agree that amortisation would eventually be of benefit to the Railways and the users of Railway transport alike, they agree with the Railway Board that the time is not yet ripe for amortisation; they would, however, suggest that this question may be taken up at the time of next revision of the Convention.

(16) The Committee consider that in the present financial prospects, it will be idle either to prescribe any minimum limit for the balance in the Revenue Reserve Fund or to extend its scope so as to include amortisation of Capital and this should wait till better days come.

(17) A Parliamentary Committee should review the rate of dividend towards the end of the next quinquennium and suggest for the years following it, any adjustment considered necessary, in the light of the situation obtaining then.

(18) It would be enough if the Ministry of Railways submitted a review on the general working of the Railways during these five years to the next Convention Committee for their consideration.

APPENDIX B

MINISTRY OF RAILWAYS

Shri Jagjivan Ram, Minister for Railways
Shri Shah Nawaz Khan, Deputy Minister for Railways

Officers of the Ministry of Railways (Railway Board) and attached offices as on 31 March, 1958

Railway Board

Shri P. C. Mukerjee	Chairman, Railway Board
„ J. Dayal	Financial Commissioner
„ Karnail Singh	Member, Engineering
„ K. P. Mushran	Member, Staff
„ K. B. Mathur	Member, Transportation
„ S. R. Kalyanaraman	Additional Member (Commercial)
„ N. C. Deb	Additional Member (Finance)
„ E. W. Isaacs	Additional Member (Mechanical)
„ Y. P. Kulkarni	Additional Member (Staff)
„ N. K. Roy	Additional Member (Works)
„ R. E. de Sa	Secretary, Railway Board
„ H. D. Awasty	Director, Civil Engineering
„ G. Dickshit	Director, Efficiency Bureau
„ L. N. Mathur	Director, Electrical Engineering
„ C. T. Venugopal	Director, Finance
„ R. Krishnaswamy	Director, Mechanical Engineering
„ G. P. Shahani	Director, Railway Planning
„ B. C. Malik	Director, Rail Movements
„ H. D. Singh	Director, Railway Stores
„ S. Parthasarathy	Director, Security and Vigilance and Inspector General, Railway Protection Force.
„ L. C. Mohindra	Director, Signalling and Tele-communication
„ Ratan Lal	Director, Traffic (Transportation)
„ L. A. Natesan	Economic Adviser
„ N. K. Mehra	Joint Director, Civil Engineering
„ V. P. Sawhney	Joint Director, Establishment
„ K. S. A. Padmanabhan	Joint Director, Finance (Accounts)
„ H. K. Bhalla	Joint Director, Finance (Budget)
„ K. T. Mirchandani	Joint Director, Finance (Establishment)
„ P. R. K. Menon	Joint Director, Finance (Expenditure)
„ M. V. Rao	Joint Director, Finance (Projects and Procurement)
„ Y. T. Shah	Joint Director, Finance (Special)
„ M. V. Kamlani	Joint Director, Mechanical Engineering (Coal)
„ N. N. Tandon	Joint Director, Mechanical Engineering (Workshops)
„ R. S. Krishnan	Joint Director, Mechanical Engineering (Running)
Dr. L. N. Suri	Joint Director, Medical
Shri G. G. Mirchandani	Joint Director, Public Relations
„ H. M. Chatterjee	Joint Director, Railway Stores
„ M. Sundaresan	Joint Director, Steel Procurement
„ D. R. Suri	Joint Director, Traffic (Dangerous Goods)
„ G. S. A. Saldanha	Joint Director, Traffic (Freight Structure)
„ K. N. Krishnan	Joint Director, Traffic (General)
„ J. B. Rao	Joint Director, Traffic (Rates)
„ K. G. S. Iyer	Joint Director, Traffic (Transportation)
„ M. N. Bery	Joint Director (Works)
„ Usman Ali Khan	D. I. G., Railway Protection Force
„ Parshotam Lal	Deputy Secretary
„ R. S. Barve	Deputy Director, Civil Engineering

Shri B. N. Ghosh	Deputy Director, Civil Engineering (Committee)
„ A. K. Chakravarti	Deputy Director, Civil Engineering (Efficiency Bureau)
„ I. C. Bhatt	Deputy Director, Electrical Engineering
„ P. S. Mahadevan	Deputy Director, Establishment I
„ Kunwar Bahadur	Deputy Director, Establishment II
„ S. Puttasami	Deputy Director, Establishment III
„ P. T. Venugopal	Deputy Director, Establishment (General)
„ P. M. Narasimhan	Deputy Director, Establishment (Special)
„ K. S. Arora	Deputy Director, Finance (Accounts)
„ M. L. Mukherjee	Deputy Director, Finance (Expenditure)
„ M. S. Nanjundiah	Deputy Director, Finance (Projects and Procurement)
„ Nasir Khan	Deputy Director, (Investigation)
„ P. C. Luther	Deputy Director, Mechanical Engineering
„ Shahid Ali Khan	Deputy Director, Organization and Methods
„ P. S. Doraisamy	Deputy Director, Railway Planning
„ Sudershan Lal	Deputy Director, Railway Stores
„ B. C. Chowdiah	Deputy Director, Railway Stores
„ Laljee Singh	Deputy Director, Signalling
„ R. R. Bhanot	Deputy Director, Statistics
„ R. C. Chetty	Deputy Director, Steel Procurement
„ A. C. Khanna	Deputy Director, Tele-communications
„ R. Srinivasan	Deputy Director, Traffic (Commercial)
„ V. S. Misra	Deputy Director, Traffic (Efficiency Bureau)
„ A. N. Kapur	Deputy Director, Traffic (Freight Structure)
„ M. L. Gupta	Deputy Director, Traffic (General)
„ S. P. Patel	Deputy Director, Traffic (Transportation)
„ P. R. Pusalkar	Deputy Director, Traffic Transportation (General)
„ M. V. Bhavnani	Deputy Director, Traffic Transportation (Goods)
„ D. J. De	Deputy Director, Vigilance
„ P. R. Chopra	Deputy Director (Works)
„ J. L. Dutta Gupta	Deputy Director, Rail Movements (Calcutta)
„ Prabhinder Singh	Deputy Director, Rail Movements (Mughalsarai)
„ A. C. Mukherjee	Deputy Director, Railway Stores (Steel) Calcutta
„ B. D. Vatsalya	Assistant Director, Civil
„ A. Mascarenhas	Assistant Director, Coal
„ P. B. Jain	Assistant Director, Establishment I
„ M. P. K. Menon	Assistant Director, Establishment II
„ K. Parameshwaran	Assistant Director, Establishment III
„ B. N. Soni	Assistant Director, Establishment (Manual)
„ G. R. Venkataramanan	Assistant Director, Establishment (Pay Commission)
„ J. R. Anand	Assistant Director Establishment (Planning)
„ S. K. Ramanathan	Assistant Director, Finance (Budget)
„ T. C. Jain	Assistant Director, Statistics (Inspection)
„ G. Rangaswamy	Assistant Director, Statistics (Manual)
„ A. C. Gupta	Assistant Director, Statistics
„ K. L. Mehrotra	Assistant Director, Steel Procurement
„ V. Sriraman	Assistant Director, Traffic (Commercial)
„ A. C. Ahuja	Under Secretary (G)
„ G. Santhanam	Under Secretary (Parliament)
„ K. N. R. Pillai	Under Secretary (Welfare)
„ N. B. Basu	Assistant Director, Railway Stores (Steel) Calcutta

Attached Officers

Shri Chaturvedi, M. D.	Timber Adviser
„ Mitter, F. K.	Liaison Officer (Santahar) East Pakistan
„ Man Singh	Officer on Special Duty (Personnel Efficiency Bureau)
„ Padmanabhan, K. R.	Officer on Special Duty (Accounts Inspection)

Shri Lal Dass	Officer on Special Duty (Coal)
„ Satya Prakash	Editor
„ Bejan Mitra	Assistant Editor
„ Natarajan, S.	Officer on Special Duty (Co-operative Societies)
„ Mulkraj Wadhawan	Officer on Special Duty (Mechanical)
„ Rameshwar Upadhya	Officer on Special Duty (Lands)
„ Paulose, K. K.	Officer on Special Duty (Printing Presses)
Miss Atkinson, E. M.	Special Assistant to Chairman, Railway Board
Shri Sahib Singh	Assistant Accounts Officer (Partition)
„ Sen, N. C.	Assistant Accounts Officer (Budget)
„ Ram Murti Singh	Hindi Officer

Section Officers (Grade II)

Shri Radhey Shiam	Budget Branch
„ Thiagarajan, J.	Cash Branch
„ Khuller, S. R.	Coal Branch
„ Agarwal, R. K.	Efficiency Bureau Branch
„ Bua Ditta	Electrical Branch
„ Madan, H. K.	Establishment (Co-operative) Branch
„ Hariharan, R. R.	Establishment (Co-operative) Branch on leave
„ Narayanaswami, K. N.	Establishment (Gazetted Recruitment) Branch
„ Miglani, R. L.	Establishment (General) Branch
„ Jayaraman, N. V.	Establishment (Labour) Branch
„ Pancham Lal	Establishment (Non-Gazetted) Branch
„ Sankara Narayanan, T. C.	Establishment (Officers) Branch
„ Ghosh, S. C.	Establishment (Officers) II Branch
„ Thapar, P. L.	Establishment (Railway Board) Re-organization Branch
„ Nair, R. K.	Establishment (Railway Board) I Branch
„ Jagat Ram	Establishment (Railway Board) II Branch
„ Dhingra, L. C.	Establishment (Railway Board) III Branch
„ Madhavchari, V.	Establishment (Representation) Branch
„ Joshi, V. P.	Establishment (Special) Branch
„ Kallat, F.	Establishment (Vigilance) Branch
„ Bhasin, S. P.	Finance (Establishment) Branch
„ Gurmukh Singh	Finance (Expenditure) I Branch
„ Suraj Prasad	Finance (Expenditure) II Branch
„ Sharma, J. B.	Finance (Foreign Exchange) Branch
„ Kapur, A. R.	Finance (Loans) Branch
„ Sharma, J. P.	Finance (Pension) Branch
„ Blagan, R. P.	Finance (Projects and Procurements) Branch
„ Hira Lal	General Branch
„ Sivaraman, S. V.	General (Parliament) Branch
„ Sardari Lal	Mechanical I Branch
„ Malhotra, H. L.	Mechanical II Branch
„ Ghosh, J. N.	Organization and Methods Branch
„ Rup Lal	Organization and Methods (Training) Branch
„ Bishan Singh	Railway Planning Branch -
„ Ramasubban, S. V.	Railway Freight Structure Enquiry Committee Branch
„ Rewari, D. C.	Railway Stores
„ Raghu Nath	Railway Stores (Foreign Procurement) Branch
„ Sivaraman, S.	Railway (Stores) Steel on leave
„ Ragade, R. R.	Statistical I Branch
„ Chopra, L. D.	Statistical III Branch
„ Beli Ram	Steel Procurement (Finance) Branch
„ Khanna, K. D.	Section Officer (Stenographers)
„ Sharma, R. L.	Traffic (Commercial) Branch

Shri Bharal, R. S.	Traffic (General) I Branch
„ Lal, J. B.	Traffic (General) II Branch
„ Srivastava, S. K.	Traffic (Transportation) III Branch
„ Venkataraman, T. H.	Traffic (Transportation) V Branch
„ Ganguly, K. D.	Works I Branch
„ Jagdish Chander	Works V Branch
„ Surjan Singh	On L. P. R.
„ Sheopory, A. N.	On L. P. R.

Section Officers (Grade III)

Shri Ganesharatnam, M.	Budget
„ Harmesh Chand	Budget
„ Gopal Dass	Budget (Committee) Branch
„ Tilak, G. V.	Cash Branch
„ Chibber, S. N.	Chasing Cell
„ Nand Lal	Coal Branch
„ George, K. T.	Coal Committee Branch
„ Jain, K. C.	Economic Adviser's Branch
„ Jain, S. C.	Efficiency Bureau Branch
„ Nair, M. N. N.	Efficiency Bureau Branch
„ Rajagopalan, B.	Establishment (Discipline and Appeal) Branch
„ Sharma, M. G.	Establishment (Gazetted Recruitment) Branch
„ Jauhry, I. B.	Establishment (Gazetted Service) Branch
„ Rajagopalan, M.	Establishment (Gazetted Recruitment) Branch
„ Bajpai, M. N.	Establishment (General) Branch
„ Amarnath Pershad	Establishment (General) Branch
„ Narasimhan, S.	Establishment (Labour) Branch
„ Sinha, A. K.	Establishment (Labour) Branch
„ Gopal, S. N.	Establishment (Manual) Branch
„ Handa, S. L.	Establishment (Manual) Branch
„ Gupta, K. C.	Establishment (Medical) Branch
„ Rangamannar, K. C.	Establishment (Non-gazetted) Branch
„ Bhalla, H. P. S.	Establishment (Officers) I Branch
„ Pai, V. S.	Establishment (Railway Board) III Branch
„ Bhardwaj, K. R.	Establishment (Scheduled Castes) Branch
„ Sarkar, D. P.	Establishment (Special) I Branch
„ Babbar, T. R.	Establishment (Special) II Branch
„ Chakravarti, M.	Establishment (Tribunal) Branch
„ Mohan Lal	Establishment (Vigilance) Branch
„ Comfort, E. W.	Establishment (Welfare) Branch
„ Bakshi Ram, I.	Finance (Esculator Claims) Branch
„ Naidu, J. P.	Finance (Establishment) Branch
„ Bhardwaj, C. L.	Finance (Establishment) Branch
„ Sharma, P. C.	Finance (Expenditure) I Branch
„ Aggarwal, P. C.	Finance (Expenditure) I Branch
„ Puri, K. L.	General Accommodation Branch
„ Bannerjee, G. G.	Issue Branch ..
„ Khanna, A. N.	Mechanical I Branch
„ Chadha, R. L.	Mechanical II Branch
„ Dutta, D.	Partition (Co-ordination) Branch
„ Sankarnarain, V.	Railway Freight Structure Enquiry Committee (Implementation) Branch
„ Satya Pal	Railway Stores (Development) Branch
„ Sen, P. C.	Railway Stores (Esculator Claims) Branch
„ Mangal Pershad	Railway Stores (Foreign) Branch
„ Ohri, C. L.	Railway Stores (Indigenous) Branch
„ Ram Ditta Mal	Railway Stores (Steel Procurement) Branch

Shri Sobti, D. R.	Record Branch
„ Srinivasa Rao, S. V.	Security Branch
„ Srivastava, M. P.	Security Branch
„ Krishna Swarup	Statistical II Branch
„ Ballal, P. N.	Statistical IV Branch
„ Ram Dass	Statistical (Manual) Branch
„ Ohri, J. R.	Traffic (Commercial) II Branch
„ Kidar Nath I	Traffic (Commercial) III Branch
„ Harbans Singh	Traffic (Commercial) IV Branch
„ Passi, H. K.	Traffic (General) III Branch
„ Datta, J. S.	Traffic (General) IV Branch
„ Kohli, R. K.	Traffic (Transportation) I Branch
„ Bannerjee, S. C.	Traffic (Transportation) II Branch
„ Parti, Y. R.	Traffic (Transportation) IV Branch
„ Chatterjee, M. N.	Works II Branch
„ Dwarka Dass	Works III Branch
„ Budha Singh	Works IV Branch
„ Amrit Singh	Works VI Branch
„ Khurana, R. D.	Works (Committee) Branch
„ Pershad, R. N.	On L. P. R.

Private Secretaries

Shri Ayodhya Prasad	Private Secretary to Minister
„ Nand Kumar	Additional Private Secretary to Minister
„ R. N. Mehrotra	Private Secretary to Dy. Minister
„ K. K. Gopalakrishnan	Private Secretary to C. R. B.
„ V. B. Menon	Private Secretary to F. C.
„ G. D. Sud	Private Secretary to F. C.
„ M. R. Anand	Private Secretary to M. S.
„ Brij Lal	Private Secretary to M. T.
„ J. K. Razdan	Private Secretary to A. M. F.
„ S. Gopalaswami	Private Secretary to A. M. C.
„ O. D. Sharma	Private Secretary to A. M. M.
„ R. K. Venkatesan	Private Secretary to A. M. S.
„ Inder Nath	Private Secretary to A. M. W.
„ Panchami Singh	Private Secretary to Secretary

Research, Design and Standardization Organization, New Delhi

Shri A. V. D'Costa	Director, Standardization (Civil)
„ N. B. Shroff	Joint Director (Architecture)
„ S. S. Verma	Joint Director (Building and Structure)
„ C. S. Lal	Joint Director (Carriage and Wagon)
„ B. L. Sabharwal	Joint Director (Signal and Tele-communication)
„ K. C. Sood	Joint Director (Track)
„ B. N. Gupta	Deputy Director (Building and Structure)
„ P. N. Talwar	Deputy Director (Carriage and Wagon)
„ M. S. Mehta	Assistant Director (Architecture)
„ B. L. Bailur	Assistant Director (Carriage and Wagon I)
„ C. M. Malik	Assistant Director (Carriage and Wagon II)
„ J. S. Bhavra	Assistant Director (Civil)
„ Shiam Sunder Lal	Assistant Director (Signal and Tele-communication)
„ Shanti Nath	Assistant Director (Specification)
„ Atma Ram	Establishment Officer
„ M. C. Pal	Sectional Officer (A)
„ D. A. Fernandes	Sectional Officer (B)
„ N. Krishnappa	Sectional Officer (D)
„ Anup Singh	Sectional Officer (E)
„ M. W. Desai	Sectional Officer (E—I)
„ G. Chakrapani	Sectional Officer (E—II)
„ H. S. Sodhi	Sectional Officer (Signal and Tele-communication—I)
„ M. L. Jaggia	Sectional Officer (Signal and Tele-communication—II)

Research, Design and Standardization Organization, Chittaranjan

Shri K. C. Lall	Director, Standardization (Mechanical)
„ R. K. Sethi	Joint Director (Diesel)
„ R. Krishnamurti	Joint Director (Loco)
„ M. M. Suri	Deputy Director (Loco)
„ K. S. Krishnan	Assistant Director (Loco)
„ P. V. S. Sastry	Senior Inspecting Engineer
„ A. V. Srinivasan	Sectional Officer (Loco)—I
„ S. H. Subhana	Sectional Officer (Loco)—II
„ S. K. Bannerjee	Officer-in-Charge
„ R. N. Sinha	Liaison Engineer
„ Salig Ram	Inspecting Engineer

Research Directorate of the Research, Design and Standardization Organization, Alambagh, Lucknow

Shri S. L. Kumar	Director, Research
„ U. G. K. Rao	Joint Director, Research (Civil)
„ R. L. Vohra	Joint Director, Research (Mechanical)
„ R. Basu Choudhury	Deputy Director (Civil)
„ M. S. Murti	Deputy Director (Electrical)
„ A. K. Mukherjee	Deputy Director (Mechanical)
„ G. H. Keswani	Deputy Director (Publication)
„ B. V. Mallya	Officer on Special Duty
„ S. N. Ramaswamy	Assistant Director (Building)
„ M. B. Ramachandani	Assistant Director (Electronics and Instrumentation)
„ R. Nagarajan	Assistant Director (Soil Mechanics)
„ K. Bhattacharya	Assistant Director (Publication)
„ R. K. Bose	Dynomometer Car Officer
„ C. S. P. Sastry	Oscillograph Car Officer—I
„ K. A. Advani	Oscillograph Car Officer—II
„ S. Malviya	Oscillograph Car Officer—III
„ R. L. Tuli	Establishment Officer

Research Directorate of the Research, Design and Standardization Organization, Chittaranjan Sub-Centre

Shri R. G. Bhatawadekar	Joint Director, Research (Metallurgical and Chemical)
„ S. Ramanujam	Deputy Director (Metallurgical and Chemical)
„ V. R. S. Subramanian	Chemist and Metallurgist—I
„ A. K. Bhattacharya	Chemist and Metallurgist—II
„ M. N. Bhide	Assistant Director (Metallurgical)

Railway Liaison Organization, New Delhi

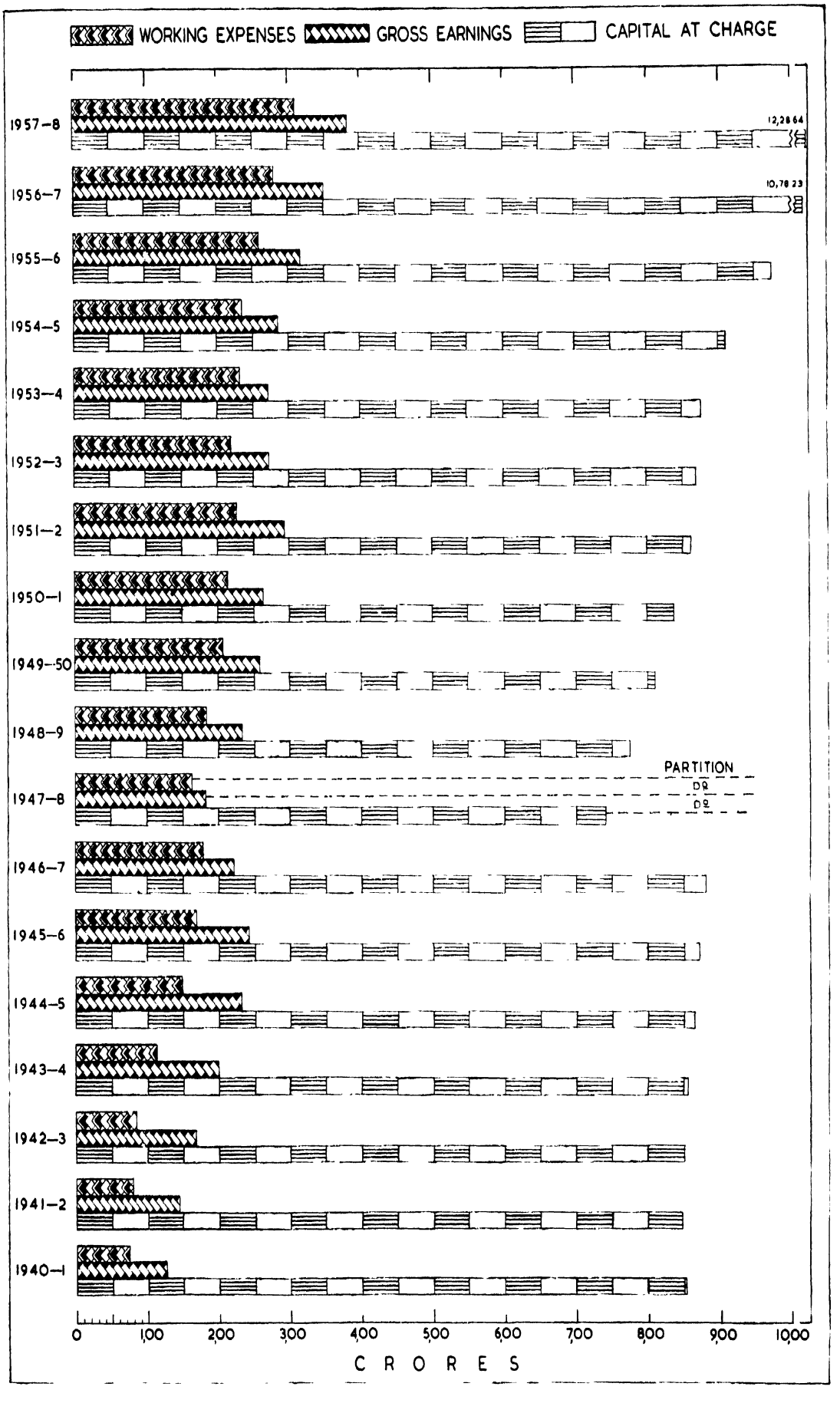
Shri B. R. Kinra	Railway Liaison Officer, New Delhi
„ Manohar Lal	Asstt. Railway Liaison Officer, New Delhi

APPENDIX C

GRAPHS

ALL INDIAN RAILWAYS

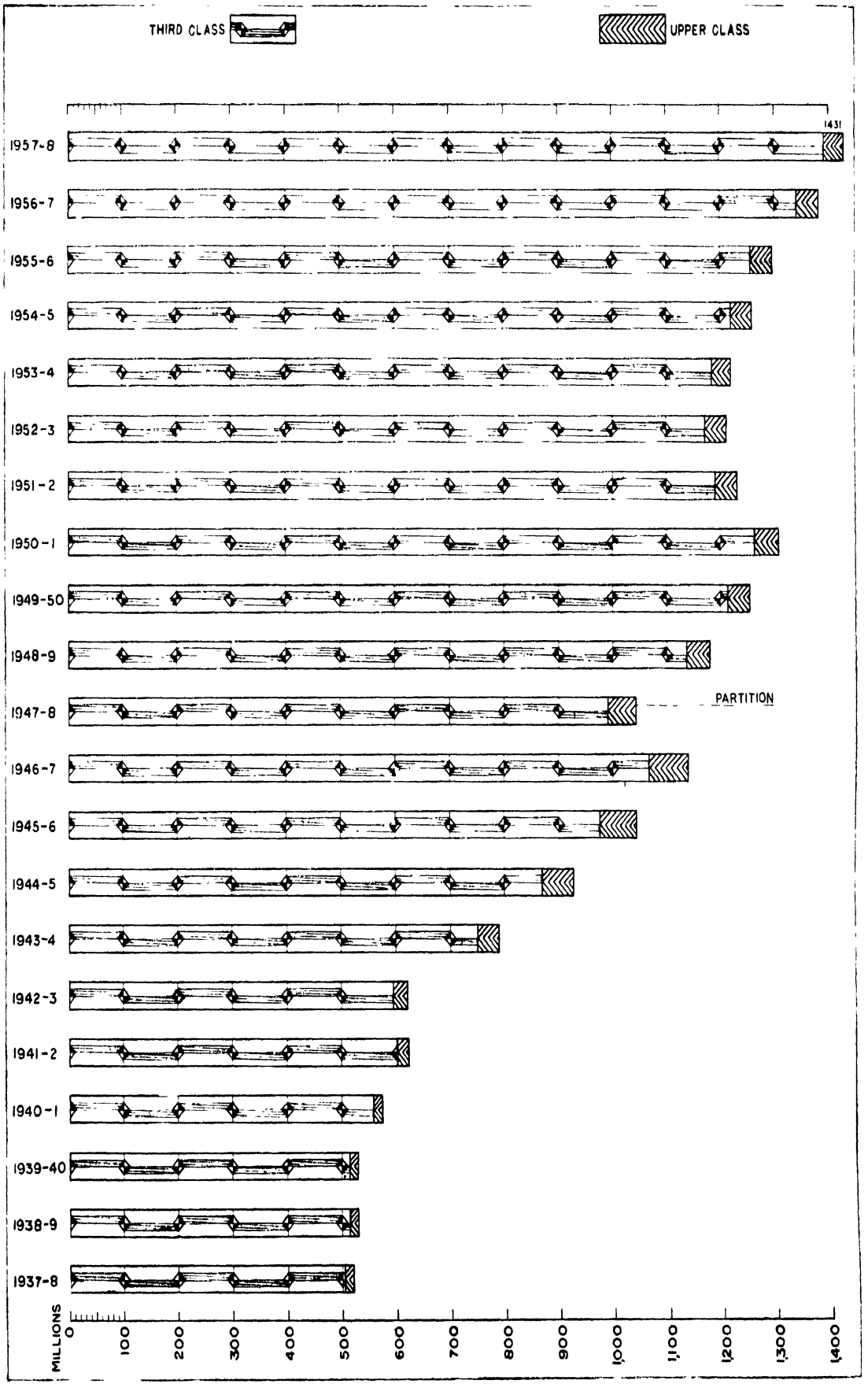
I—TOTAL CAPITAL AT CHARGE, TOTAL GROSS EARNINGS AND TOTAL WORKING EXPENSES



NOTE.—The horizontal scale of figures are in crores of rupees.

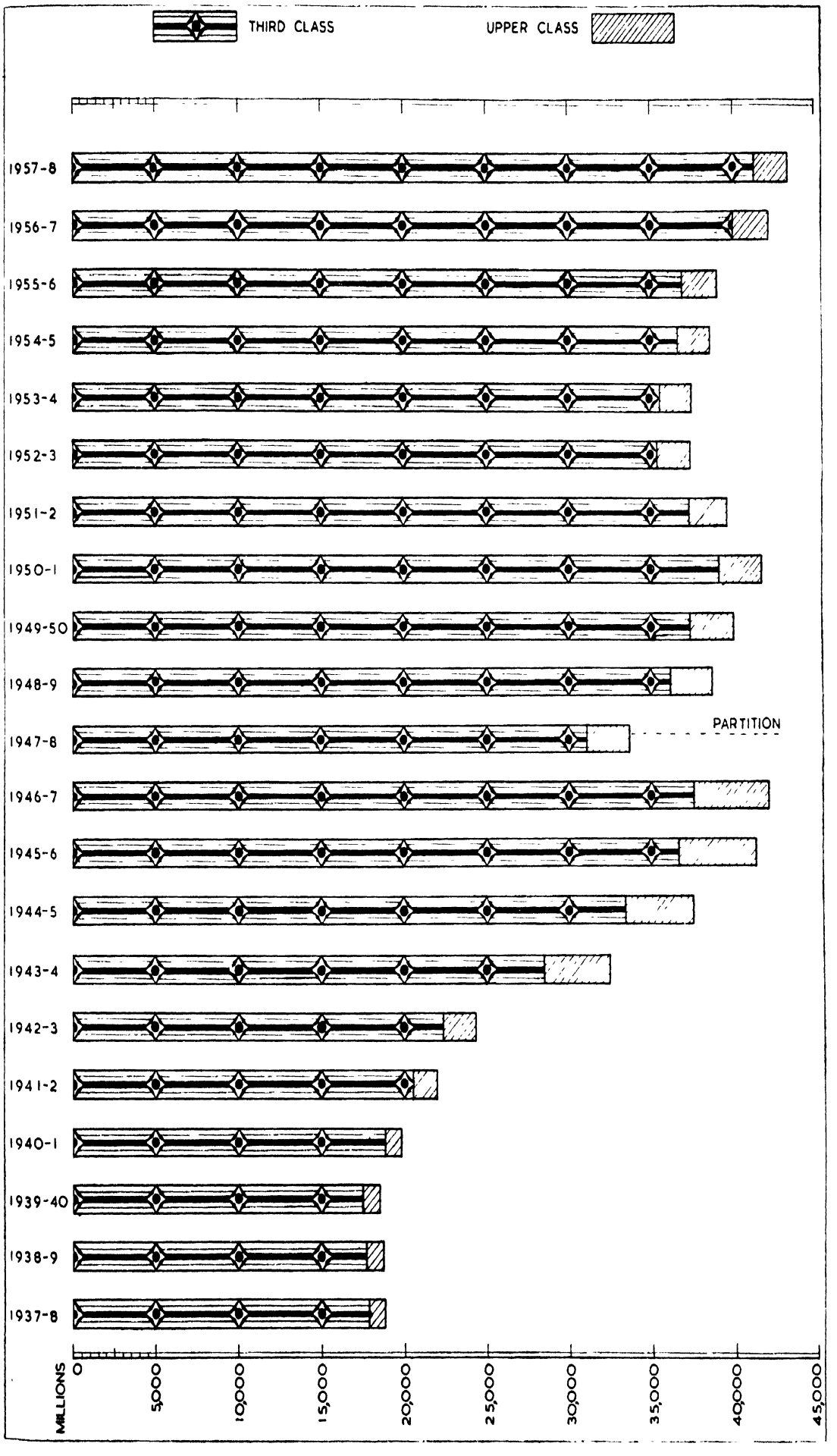
ALL INDIAN RAILWAYS

II—NUMBER OF PASSENGERS CARRIED



ALL INDIAN RAILWAYS

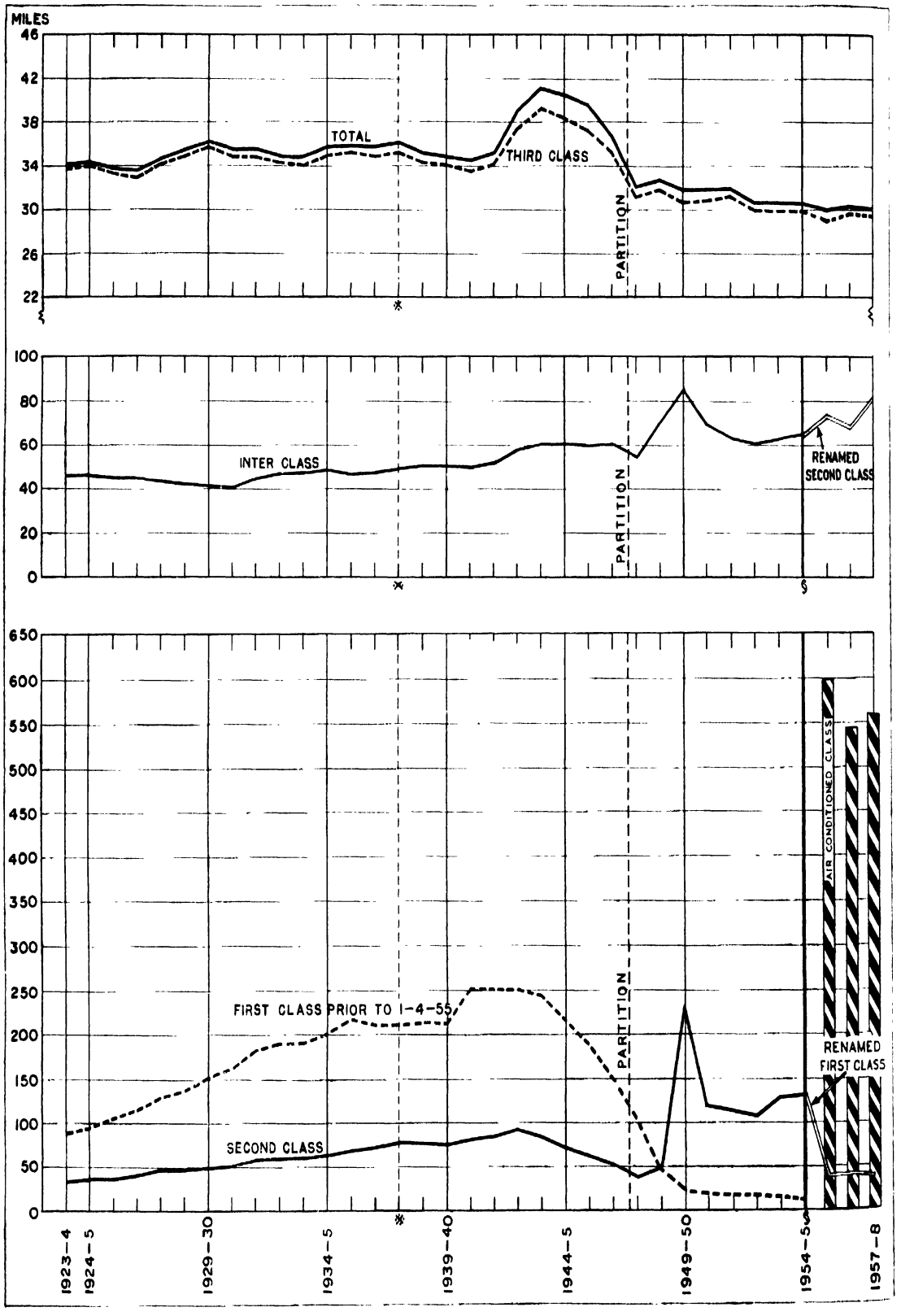
III—NUMBER OF PASSENGER MILES



ALL INDIAN RAILWAYS

IV—AVERAGE MILES A PASSENGER WAS CARRIED

(INCLUDES SUBURBAN AND NON-SUBURBAN TRAFFIC)



* Burma Railways separated from the Indian Railway system with effect from 1 April 1937.

NOTE.—The classification between 1 December 1948 and 30 June 1950 has been taken to correspond with the old classification as under:

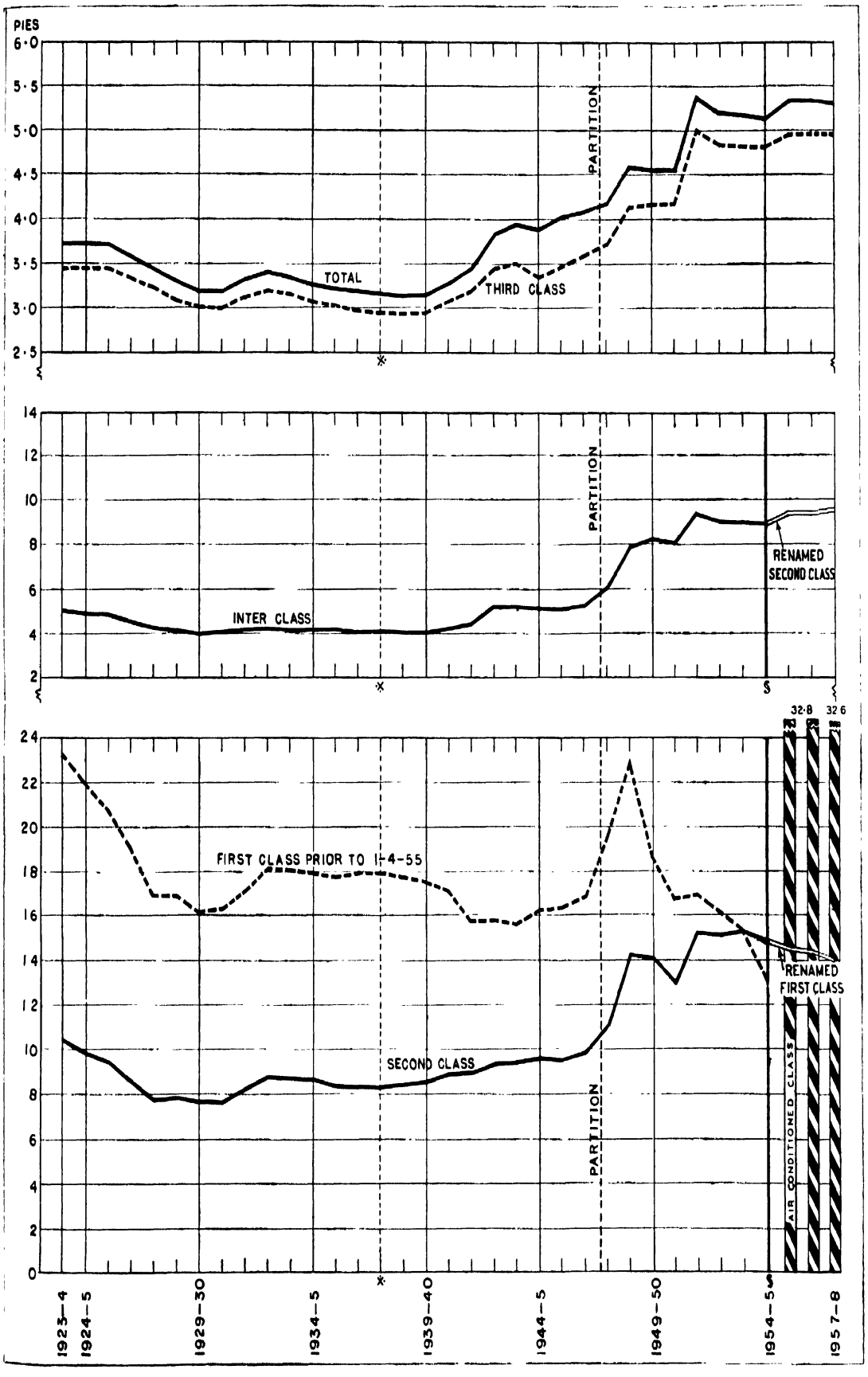
Class	I	=First class
Class	II Special	=Second class
Class	II	=Inter class
Class	III	=Third class

§ With effect from 1 April 1955 the pre-existing Inter class was renamed as Second class and the pre-existing Second class as First class, the pre-existing First class being abolished. From 1948-9 to 1954-5 the Air-conditioned class was also included in the pre-existing First class.

ALL INDIAN RAILWAYS

V—AVERAGE RATE CHARGED PER PASSENGER PER MILE

(INCLUDES SUBURBAN AND NON-SUBURBAN TRAFFIC)

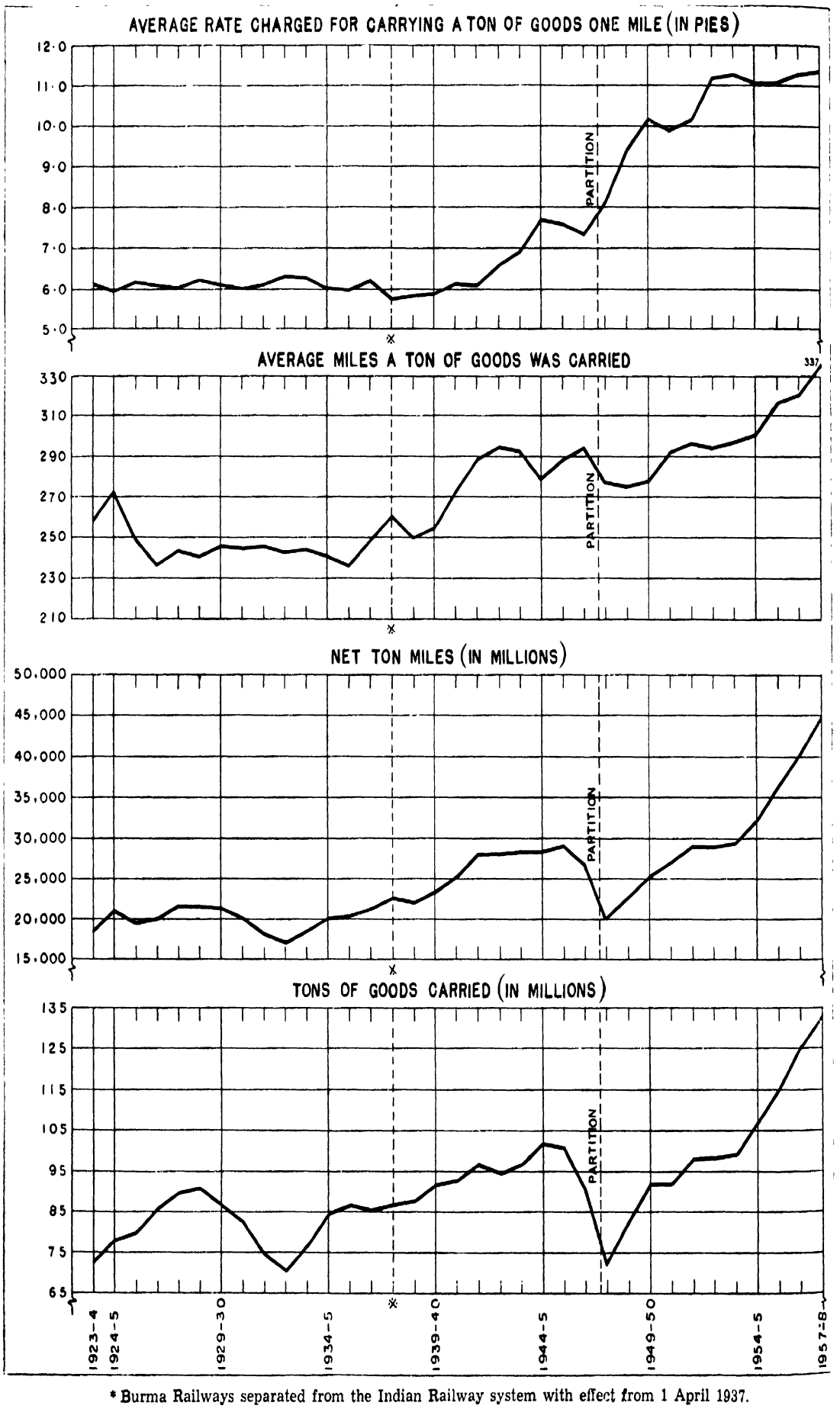


* Burma Railways separated from the Indian Railway system with effect from 1 April 1937.

§ With effect from 1 April 1955 the pre-existing Inter class was renamed as Second class and the pre-existing Second class as First class, the pre-existing First class being abolished. From 1948-9 to 1954-5 the Air-conditioned class was also included in the pre-existing First class.

ALL INDIAN RAILWAYS

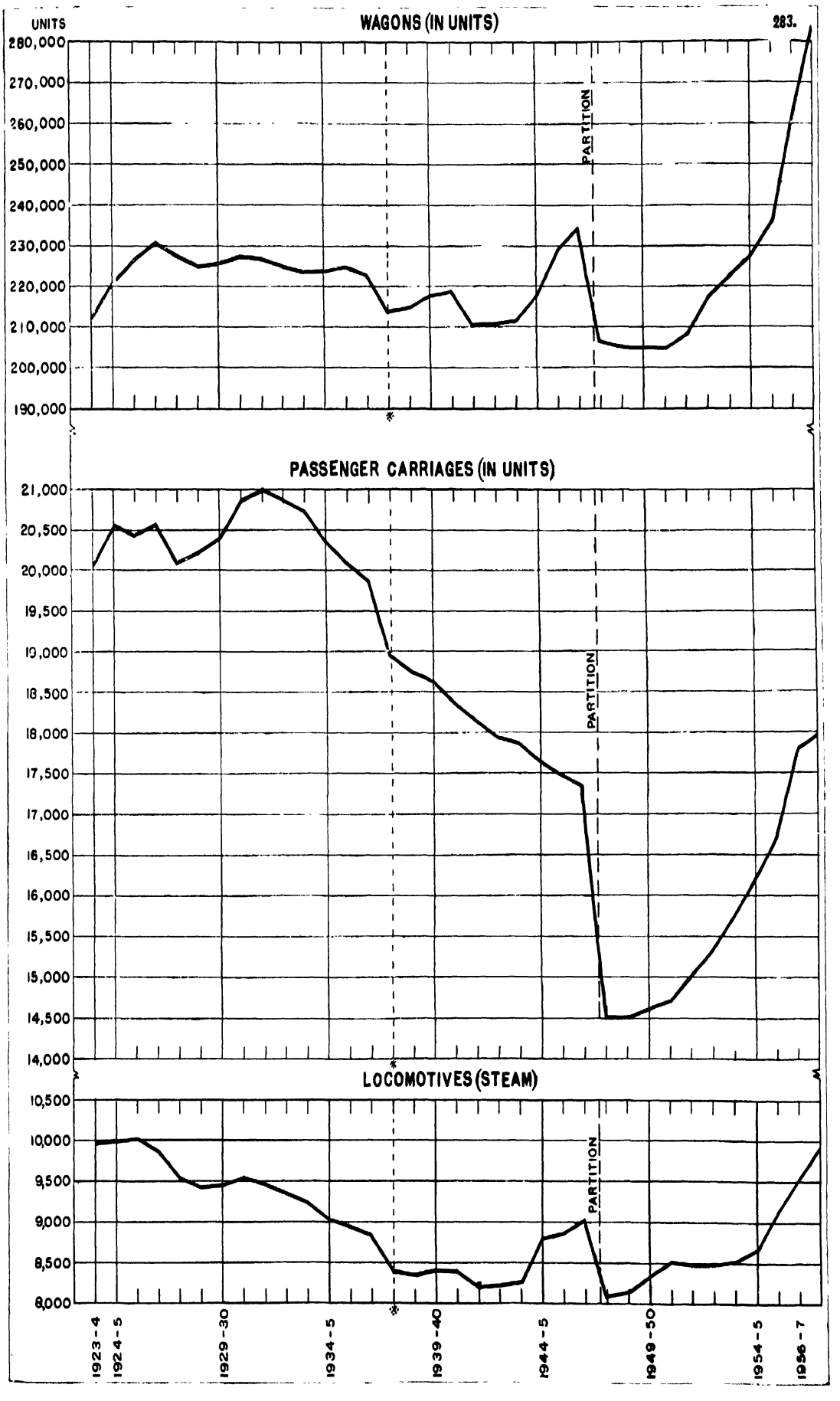
VI—AVERAGE RATE, AVERAGE LEAD, NET TON MILES AND TONS CARRIED



* Burma Railways separated from the Indian Railway system with effect from 1 April 1937.

ALL INDIAN RAILWAYS

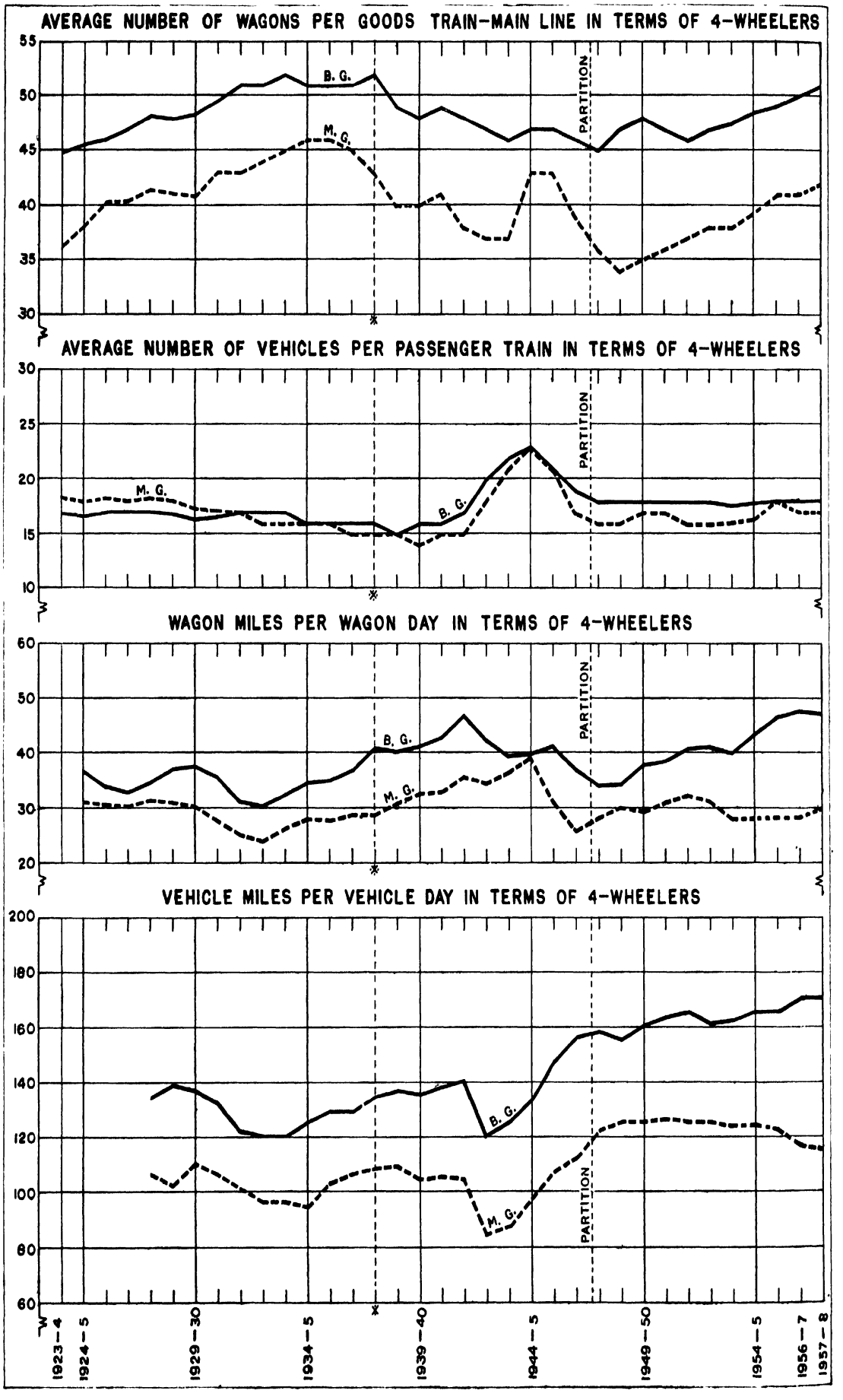
VII—ROLLING-STOCK IN SERVICE



* Burma Railways separated from the Indian Railway system with effect from 1 April 1937.

GOVERNMENT RAILWAYS

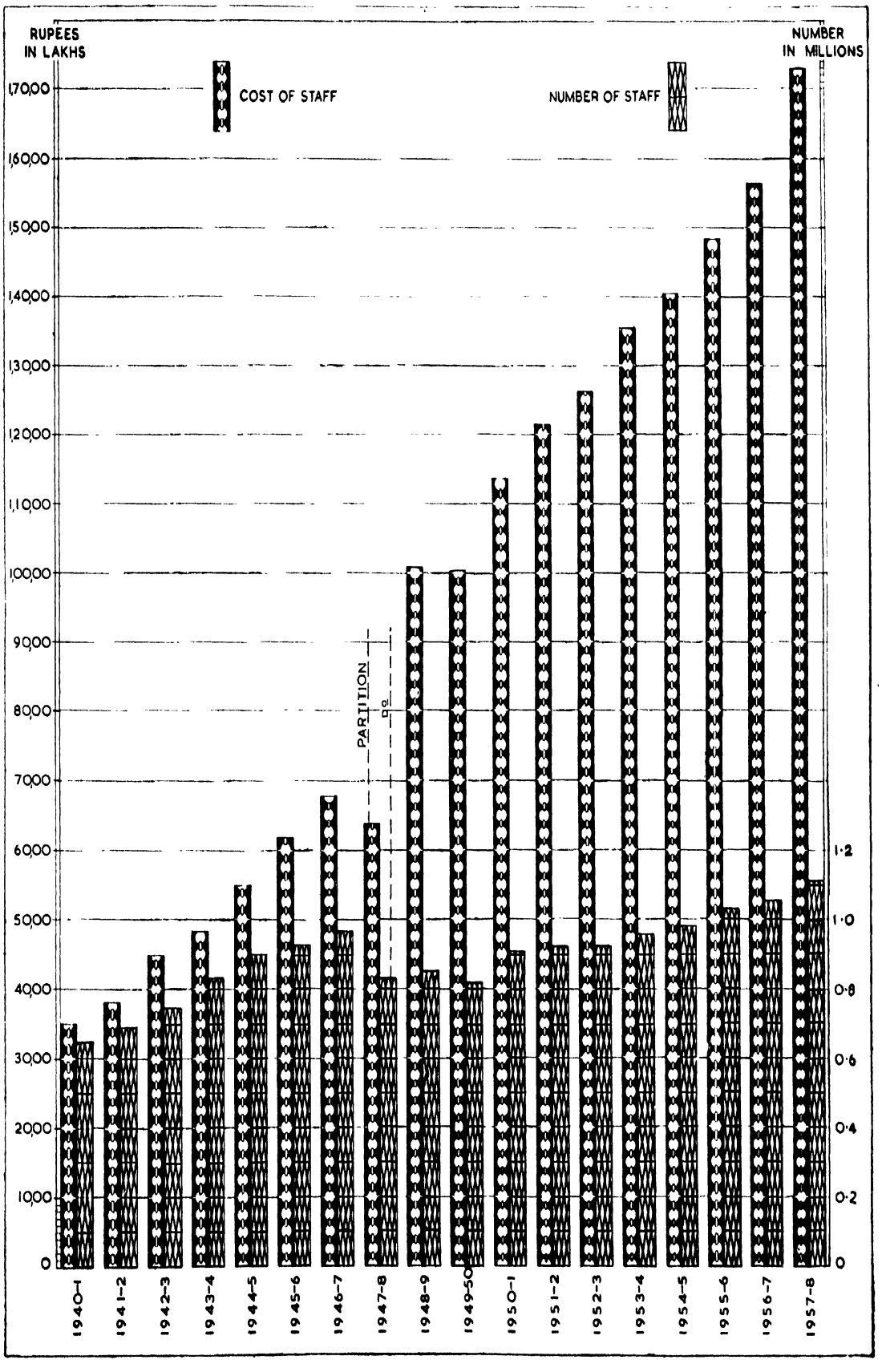
VIII—WAGON AND VEHICLES UTILIZATION



* Burma Railways separated from the Indian Railway system with effect from 1 April 1937.

GOVERNMENT RAILWAYS

IX—TOTAL NUMBER AND COST OF STAFF



APPENDIX D

Railway Administrations in India (alphabetically arranged) showing the working agencies, ownership and route mileage open on 31 March 1958.

Indian Railway systems have been classified under two classes for statistical purposes:

Government Railways
Non-Government Railways

Railway system		Lines comprised in the system			
Name	Worked by	Name	Gauge	Route mileage	Owned by
		GOVERNMENT RAILWAYS			
(1) Central	Indian Government	(a) Central	5'-6"	3,797	Indian Government.
		(b) Central	3'-3⅜"	809	Do.
		(c) Central	2'-6"	320	Do.
		(d) Ellichpur-Yeotmal	2'-6"	118	Branch Line Company under rebate terms.
		(e) Pulgaon-Arvi	2'-6"	22	Do.
		(f) Central	2'-0"	265	Indian Governmnt.
(2) Eastern	Indian Government	(a) Eastern	5'-6"	2,308	Do.
		(b) Eastern	2'-6"	17	Do.
(3) Northern	Indian Government	(a) Northern	5'-6"	4,141	Do.
		(b) Rupar-Nangal-Dam*	5'-6"	35	Do.
		(c) Mukarian Pathankot	5'-6"	26	Do.
		(d) Northern	3'-3⅜"	2,005	Do.
		(e) Northern	2'-6"	162	Do.
(4) North Eastern	Indian Government	North Eastern	3'-3⅜"	3,075	Do.
(5) Northeast Frontier	Indian Government	(a) Northeast Frontier†	5'-6"	2	Do.
		(b) Northeast Frontier	3'-3⅜"	1,598	Do.
		(c) Chaparmukh-Silghat‡	3'-3⅜"	51	Branch Line Company under guarantee terms.
		(d) Katakhal - Lalabazar‡	3'-3⅜"	23	Do.
		(e) Darjeeling Himalayan	2'-0"	52	Indian Government.
(6) Southern	Indian Government	(a) Southern	5'-6"	1,833	Do.
		(b) Cochin Harbour Extension	5'-6"	4	Cochin Harbour Authority.
		(c) Tenali-Repalle	5'-6"	21	District Board Guntur.
		(d) Southern	3'-3⅜"	4,141	Indian Government.
		(e) Alnavar- Dandeli	3'-3⅜"	19	Goverment of Mysore.

* Jointly owned by the Government of India and the Government of Punjab (India).

† This line is laid between Haldibari and Pakistan Border for direct communication with Pakistan.

‡ This line is guaranteed by the Government of India and also received a subsidy from the Assam Government for the first ten years.

Railway system		Lines comprised in the system			
Name	Worked by	Name	Gauge	Route mileage	Owned by
		GOVERNMENT RAILWAYS—*contd.*			
(6) Southern—*contd.*	Indian Government	(*f*) Peralam-Karaikkal	3'-3⅜"	15	Indian Government.
		(*g*) Pondicherry	3'-3⅜"	8	Do.
		(*h*) Nanjangud Town-Chamarajanagar	3'-3⅜"	22	District Boards Mysore and Mandya.
		(*i*) Southern	2'-6"	96	Indian Government.
(7) South Eastern	Indian Government	(*a*) South Eastern	5'-6"	2,495	Do.
		(*b*) South Eastern	2'-6"	925	Do
(8) Western	Indian Government	(*a*) Western	5'-6"	1,586	Do.
		(*b*) Western	3'-3⅜"	3,714	Do.
		(*c*) Western	2'-6"	717	Do.
		(*d*) Western (Ujjain—Agar)	2'-0"	42	Do.
		NON-GOVERNMENT RAILWAYS			
(1) Ahmadpur-Katwa	Ahmadpur-Katwa Railway Co.	Ahmadpur-Katwa*	2'-6"	32	Branch Line Company under guarantee terms.
(2) Arrah-Sasaram Light	Arrah-Sasaram Light Railway Co.	Arrah-Sasaram Light	2'-6"	65	Company line subsidized by District Board of Shahabad.
(3) Bankura-Damodar River	Bankura-Damodar River Railway Co.	Bankura-Damodar River*	2'-6"	60	Branch Line Company under guarantee terms.
(4) Bukhtiarpur-Bihar Light	District Board, Patna	Bukhtiarpur-Bihar Light	2'-6"	33	District Board of Patna.
(5) Burdwan-Katwa	Burdwan-Katwa Railway Co.	Burdwan-Katwa*	2'-6"	32	Branch Line Company under guarantee terms.
(6) Dehri-Rohtas Light	Dehri-Rohtas Light Railway Co.	Dehri-Rohtas Light	2'-6"	24	Company line subsidized by District Board of Shahabad.
(7) Futwah-Islampur	Futwah-Islampur Light Railway Co.	Futwah-Islampur*	2'-6"	27	Branch Line Company under guarantee terms.
(8) Howrah-Amta Light	Howrah-Amta Light Railway Co.	Howrah-Amta Light	2'-0"	44	Company line Subsidized by District Boards of Howrah and Hooghly and Municipality of Howrah.
(9) Howrah-Sheakhala Light	Howrah-Sheakhala Light Railway Co.	Howrah-Sheakhala Light	2'-0"	17	Do.
(10) Shahdara (Delhi) Saharanpur Light	Shahdara (Delhi) Saharanpur Light Railway Co.	Shahdara (Delhi) Saharanpur Light†	2'-6"	93	Company line.

* Guaranteed by the Government of India.

† Received land only from Government.

APPENDIX E

Principal Statistics of Railway Working in Selected Foreign Countries

British Railways, 1957*

Capital†	£1,688,520,943
Route mileage	18,965
Total Gross Receipts	£501,429,513
Working expenses	£528,569,699
Net traffic receipts	£(−) 27,140,186
Operating ratio	105·41%
Passenger journeys originating (in thousands)	1,101,234
Passenger miles estimated (in millions)	22,591
Passenger earnings (in thousands)	£138,899
Freight train traffic originating tons (in thousands)	274,283
Net ton miles (in millions)	20,878
Freight earnings (in thousands)	£288,517
Train miles—	
Coaching (in thousands)	246,665
Freight (in thousands)	135,265
Number of employees at end of year (including collection and delivery services)	573,499

* *British Transport Commission Financial and Statistical Accounts, 1957.*
† Capital represents the gross book value of rolling stock, vehicles, plant and equipment, lands, buildings, permanent way, etc.

U. S. Class I Railways, 1957*

Investment in railway property used in transportation service (in thousands)	$34,208,466
Route miles†	222,427
Total operating revenue (in thousands)	$10,491,390
Total operating expenses (in thousands)	$8,227,522
Operating ratio	78·42%
Revenue passengers carried (in thousands)	411,172
Revenue passenger miles (in thousands)	25,884,493
Passenger revenue (in thousands)	$735,339
Revenue tons originated‡ (in thousands)	1,380,327
Revenue ton miles‡ (in thousands)	618,193,517
Freight revenue (in thousands)	$8,928,511
Train miles—	
Passenger (in thousands)	274,789
Freight (in thousands)	446,733
Number of employees (in thousands)	985

* *Seventy first Annual Report on Transport Statistics in the United States for the year ended December 31, 1957.*
† Average miles represented by income account.
‡ Short tons of 2,000 lbs.

Canadian Railways, 1957

	Canadian National Railways*	Canadian Pacific Railways**
Capital†	$3,301,645,288	$2,229,262,112
Average mileage of road operated	24,282	17,111
Total operating revenues (in thousands)	$753,166	$487,565
Total operating expenses (in thousands)	$734,556	$417,786
Net operating revenues (in thousands)	$18,610	$69,779
Operating ratio	97·53%	85·69%
Passengers carried (Revenue) (in thousands)	13,920	8,037
Passenger miles (Revenue) (in millions)	1,499	1,338
Passenger revenue (in thousands)	$46,818	$38,639
Tons carried (Revenue) (in thousands)	88,881	58,493
Net ton miles of freight (Revenue) (in millions)	36,674	27,281
Freight revenue (in thousands)	$587,274	$408,601
Train miles—		
Passenger service (in thousands)	23,820	16,764
Freight service (in thousands)	42,073	30,504
Number of employees (All services)	124,620	89,720

* *Annual Report, Canadian National Railways, 1957.*
** *Annual Report, Canadian Pacific Railways Company, 1957.*
† Represents Property Investment Account at the end of the year 1957.

SOUTH AFRICAN RAILWAYS, 1956-7*

Total capital expenditure	£446,630,532
Mileage of open lines as at 31 March 1957	13,441
Total earnings	£139,416,250
Total working expenditure (including depreciation)	£100,528,553
Surplus of earnings over gross working expenditure	£38,887,697
Operating ratio	72·11%
Passenger journeys	267,794,870
Earnings—Passenger	£19,070,784
Total tonnage† of revenue-earning traffic	64,685,415
Earnings—goods, coal and live-stock	£107,636,653
Total train miles run	95,005,005
Total staff at 31 March 1957	226,291

* *Report of the General Manager of Railways and Harbours for the year ended 31 March 1957.*
† Short ton of 2,000 lbs.

AUSTRALIAN RAILWAYS

—	New South Wales Railways 1956-7*	Victorian Railways 1956-7*	Queensland Railways† 1956-7*	Western Australian Government Railways 1956-7*	South Australian Railways 1956-7*
Capital (Open lines)	£260,277,931	£102,480,886‡	£80,061,092	£48,340,410	£50,620,696
Miles open	6,103	4,408	6,387	4,117	2,550·5
Earnings	£78,688,602	£37,352,398	£35,810,855	£14,044,111	£13,835,535
Working expenses	£75,351,603	£39,118,678	£36,949,761	£16,011,316	£15,563,215
Net earnings	£3,336,999	£(—)1,766,280	£(—)1,138,906	£(—) 1,967,205	£(—) 1,727,680
Operating ratio	95·76%	104·73%	103·18%	114·01%	112·49%
Passenger journeys	2,63,136,494	167,404,861	34,117,359	13,270,900	17,406,168
Passenger miles	Not available	1,853,595,916	Not available	166,801,893	273,156,682
Passenger revenue	£26,733,036§	£11,364,390	£3,490,722	£1,076,521	£1,405,803
Tonnage of goods and live-stock (paying)	18,142,441¶	9,380,699	8,151,429	4,223,031	4,518,170
No. of tons carried one mile (paying)	Not available	1,317,392,882	1,480,694,645	667,695,009	648,396,868
Total goods revenue (including live-stock)	£51,955,566	£22,110,500	£29,843,332	£11,697,627	£11,036,402
Train mileage—					
Passenger	21,923,874	13,021,139	7,401,199	2,947,838	4,129,334
Goods	15,106,490**	5,522,912	12,408,327	5,330,148	3,058,241
No. of staff	54,887	29,816	29,823	14,102	1,267

* *Annual Report for the year ended 30 June 1957.*
** *Inclusive of 789,347 mixed train miles.*
† Exclusive of Uniform Gauge Railway.
‡ Capital reduced by £30,000,000, Railways (Finance Adjustment) Act, 1936.
§ Represents earnings from coaching rents, etc.
¶ Does not include live-stock tonnage.

Books, Technical Monographs and Technical Papers published by the Railway Board

BOOKS

(1) Report by the Railway Board on Indian Railways. Published yearly. Price Volume I—Report, Rs. 10.50 or 16*sh.* 6*d.* Volume II—Statistics, Rs. 12.50 or 19*sh.* 6*d.* (1956-7).

(2) Indian Railways, 1956-7. Published yearly. Price Rs. 2.00.

(3) Classified List of Gazetted Establishment of Indian Railways corrected upto 31 December 1957. Rs. 9.50 or 15*sh.*

(4) History of Indian Railways, constructed and in progress corrected upto 31 March 1955. Published sexennially. Price Rs. 18.50 or 28*sh.*

(5) Annual Report of Railway Testing and Research Centre, 1956-7. Price Rs. 7.50.

TECHNICAL MONOGRAPHS

(6) Ten monographs have been published and issued from the Railway Testing and Research Centre. These are not priced and are meant only for the use of Indian Railway Officials. A complete list is given below:

Technical Monograph	*Name*	*Author*
No. 1.	Explanatory notes on soil exploration and field identification	...
„ 2.	Suggested simple method of designing concrete mixes for minor works	...
„ 3.	Analytical comparison between different methods of concrete mix design	...
„ 4.	Tunnelling techniques	U. G. K. RAO
„ 5.	The problem of diesel *vs.* steam rail traction	R. K. SETHI
„ 6.	The significance of laboratory tests on the design and selection of engineering materials	S. RAMANUJAM
„ 7.	Waterway required for bridges	GURDIAL SINGH
„ 8.	New transhipment yard at Garhara (near Barauni junction)	K. C. SOOD AND OTHERS
„ 9.	The selection and design of a rail section	K. C. SOOD AND M. MENEZES
„ 10.	Simple Tests to determine approximately the quality of building limes	...

TECHNICAL PAPERS

(7) Over 334 papers have been published by the Technical Section of the Railway Board's Office. The papers comprise:

(a) Original descriptions of railway works and studies of railway problems in India and elsewhere.

(b) Reprints of articles from foreign engineering magazines.

(c) Reprints or abstracts of reports received by the Government of India on subjects connected with railways.

The catalogue of Technical Papers published by the Director Research, Railway Testing and Research Centre, Alambagh, Lucknow, can be had from the Manager of Publications, Civil Lines, Delhi-8, on payment of 44 nP. A few of the important technical papers are mentioned below:

Technical Paper	*Name*	*Author*
No. 72.	The design of well foundation for bridges	(Compiled)
„ 148.	Statistics of Railway working expenditure	G. DEUCHARS
„ 153.	River training and control on the guide bank system	F. J. E. SPRING
„ 215.	The Hardinge Bridge over the Ganges Lower at Sara	SIR ROBERT GALES
„ 219.	Technical education in relation to railways in America	H. L. COLE
„ 239.	The Central Control system for the scheduling of operations in locomotive repairs workshops in England	H. H. SAUNDERS
„ 242.	Railway Statistics and the Operating Officer	MAJOR F. H. BUDDEN
„ 243.	How to judge the prospects of new railways	LT. COL. L. E. HOPKINS
„ 244.	Sleeper spacing and the effect of the new Permissible Axle-loads	A. F. HARVEY
„ 245.	Report of the Indian Railway Bridge Committee on track stresses	
„ 247.	1st and 2nd interim reports of the Indian Railway Bridge Committee on Impact and revision of the Bridge rules	
„ 249.	Operating Statistics and the Divisional Officer	MAJOR F. H. BUDDEN
„ 250.	Axle-loads, Wheel Diameter and railheads dimensions	...
„ 251.	A. R. E. and maintenance of Way Association's Impact tests on Railway Bridges	(Reprinted)

Technical Paper	*Name*	*Author*
	Description of the Planning, Progress, Coaling and Engine Repair, Schedule System introduced on the G. I. P. Railway Loco. Shops at Parel	F. G. S. MARTIN
No. 256.	Notes on the preparation of railway projects	H. L. GLASS
„ 259.	The estimation of Passenger earnings on new projects	A. LINES
„ 261.	Tube wells on the N. W. Railway, 1925	J. WARDON
„ 262.	Note on steps to be taken to permit of running the future large vehicles on Broad Gauge Railways, 1927	A. I. SLIEGH
„ 263.	Note on composite Index numbers of Indian Railways	W. G. BARNETT
„ 264.	Memorandum on Traffic Surveys	R. N. NICOLLS
„ 266.	Principles of the Absolute Block System, 1929	L. H. KIRKNESS
„ 267.	Flood-Lighting, 1929	H. J. MULLENEUX
„ 271.	Antiseptic treatment of Pinus Longifolia (Chir) for Railway Sleepers	KAMESAM
„ 272.	The Sterographic Survey of the Shakagam	MAJOR KENNETH MASON (Reprint)
„ 273.	A Schedule system for the Control of Operations in Workshops, 1929	H. H. SAUNDERS
„ 275.	An Enquiry into the Preparation of Periodic Financial Returns on the Railways of Great Britain, Egypt and Palestine, 1929	MAJOR WAGSTAFF
„ 276.	Investigation into the Strength of Rail Joints	H. HOWE AND L. H. SWAIN
„ 277.	Description of the Cost Accounting Scheme introduced in the Locomotive Workshops at Moghalpura	A. E. HOWELL
„ 278.	Notes on Tube Railway Construction	H. G. SALMOND
„ 279.	Report on Track Practice on American and Canadian Railways	A F. HARVEY
„ 280.	The Installation of a Production system in the Locomotive Workshops at Moghalpura	A E HOWELL
„ 281.	The Belt System of Repairs introduced in the Loco. Workshops at Kancharapara	R. DE'VERA IRWIN AND J. R. POTTER
„ 282.	Note on "Fridera" a composition for reconditioning abraised spike holes in Railway Sleepers	S. KRISHNA AND T. P. GHOSE
„ 283.	Description of a system introduced in the Stores Department of E. I. Railway with appendices	F. G. S. MARTIN AND A. R. A. HARE DUKE
„ 284.	Notes on progressive system of wagon repairs as introduced in N. W. R. Workshops at Moghalpura	B S SINDHU
„ 285.	Notes on the methods by which the provisions in the English Railway Act of 1921 were framed both from the points of view of the Railway Coys. and of Work—the compilers of the Act	E. A. SIMS
„ 286.	Stresses in Fishplates for 90 lbs. Rails (with conclusions affecting the design of standard rail and fishplate sections)	A. M SIMS
„ 287.	Report on Oil Burners and Wicks for Signal Lamps	H. E. COX
„ 288.	G. I. P. Railway Dynamometer Car, Report No. 11, Train Resistance	C. W. CLARKE
„ 289.	The Hump Yard in India	MAJOR H W. WAGSTAFF
„ 290.	The Indian Railway Rates' Structure. The case for its simplification. Its existing shortcomings and suggested principles as a basis for its revision	A. W. BECKETT
„ 291.	Controlled Concrete	A. W. CRIP VILLIERS
„ 292.	Hints on the Construction of a Railway in the plains with special reference to Bengal	K B. RAY
„ 293.	Simplified Design of Masonry Arch by Elastic Theory	A. VASUDEVAN
„ 294.	Frame Arch Spans for Railway Loadings	H. J. NICHOLAS
„ 295.	The Hallade Track Recorder and Hints on the Maintenance of Curves	(Reprint)
„ 296.	Paint Flanking on Railway Carriages	H. M. R. MORSE
„ 297.	The Maximum Length of Rails as affected by the range of temperature and the design of Rail-Joints	A. M. SIMS
„ 298.	Cost Accounting in English and Indian Railway Workshops	S. V. IYER
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„ 300.	Report on investigation into modern methods of introducing Transition Curves economically into existing lines of Railways	R. H. MARTIN

Technical Paper	*Name*	*Author*
No. 301.	Note on Reconditioning of Curves	R. STRICK
„ 302.	The Coach Painters Handbook and Guide	T. VILLIERS
„ 303.	Wear of Rails on curves and check rails clearances required on curves of 4° and sharper	A. M. SIMS
„ 304.	Description of the method of Locomotive Repair as carried out in the Khargpur Workshops of the Bengal Nagpur Railway	L. G. BAILEY
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„ 328.	Prestressed concrete Railway girder spans including the report on test spans	By Central Standards Office for Railways, New Delhi.
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„ 330.	Statistical Aids to Railway Operation	JAGJIT SINGH
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