

REPORT

TO

THE SECRETARY OF STATE FOR INDIA IN COUNCIL

ON

RAILWAYS IN INDIA,

FOR THE YEAR

1875-76.

BY JULAND DANVERS, ESQ.,

GOVERNMENT DIRECTOR OF THE INDIAN RAILWAY COMPANIES.



Presented to both Houses of Parliament by Command of Her Majesty.



LONDON:

PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1876.

[C.—1584.] Price 1s. 9d.

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REPORT.

To the Most Honourable the MARQUIS of SALISBURY, Secretary of State for India.

MY LORD MARQUIS,

India Office, June 1876.

I HAVE the honour to lay before your Lordship my Sixteenth Annual Report on Railways in India.

2. During the year 1875 a length of $261\frac{1}{4}$ miles was added to the system which was open at the beginning of the year, making the whole extent now completed $6,497\frac{1}{4}$ miles. Of these, 768 are constructed with a double, and $5,729\frac{1}{4}$ with a single line: 5,676 are on the 5' 6" gauge, 794 on the metre, and $27\frac{1}{2}$ on a four feet gauge. General progress.

3. The section of the Punjab Northern metre gauge Railway, which has been opened, can only be regarded as a temporary line, as it will be given up when the one parallel to it on the 5' 6" gauge has been constructed. The works towards Peshawur at present terminate at Jhelum. Beyond that place the course of the line has not been determined.

4. The works on the Indus Valley Railway have been progressing, and it is expected that all the wells for the large bridge over the Sutlej between Moulton and Bahawalpur will be fixed in their places before the end of this year. The line to that river is well advanced, and will soon be completed on the 5' 6" gauge. The works on the southern section from Kotri upwards have also been pushed on, and it is expected that the line will be opened as far as the San River by the rains of this year.

5. Fair progress has been made on the Northern Bengal Railway towards Darjeeling. It is stated that the rails will be laid over one half of the length by the rains of this year, and that by June next year the line will be ready for opening.

6. With the exception of the South Indian Railway, the extent of the guaranteed undertakings has not been materially added to during the year. That railway has been prolonged to a length of 283 miles by the opening of a portion of its southern section from Trichinopoly to Tuticorin. The lower part of this division, vizt., that reaching from Madura to Tuticorin, was formally opened by His Royal Highness the Prince of Wales in December last; but public traffic did not commence over it until the 1st January.

7. The addition made to the Oudh and Rohilkund Railway, though short, is important, embracing as it does the bridge over the Ganges at Cawnpore, which connects the Oudh and Rohilkund system with the East Indian Railway. Before it was opened a complete battery of artillery, two squadrons of cavalry, together with camels and elephants, crossed and recrossed it, to test its strength.

8. With regard to the future, the extension of the Rajputana lines southward from Ajmere has been sanctioned so as to form junctions with the Indore line on the east, and the Bombay, Baroda, and Central India Railway at Ahmedabad on the west. A glance at the map will show the course of these projects. The latter, to which preference in point of time has been given, will be about 300 miles in length, and will proceed, in continuation of the Bombay and Baroda line, but on the metre gauge, from some point near Ahmedabad through Pahlampore, east of Mount Aboo, and along the west side of the Aravalli range. The opening of the Suez Canal has produced a revolution in the trade between England and India, and this line has become of infinitely more importance than when Lord Dalhousie in 1853 described it as one of "the greatest political and commercial value, and calculated to afford the greatest amount of general advantage." It is estimated to cost Rs. 1,84,06,261, or about Rs. 61,300 per mile. The other line, 133 miles long, will be in continuation of the present metre gauge railway from Khundwa to Indore and will pass through Neebuch. Its cost is put down at Rs. 82,48,660, or Rs. 62,000 per mile. Extensions sanctioned.

9. Sanction has also been given to a railway from Nagpore, the present terminus of that branch of the Great Indian Peninsula Railway to Dongaghur, in the province of Chutteesgurh. The estimated cost is Rs. 83,74,598 and the length is 123 miles. The line will pass through a country rich in agricultural produce. With the increased facilities for transit which a railway affords, it is expected that a much larger traffic than now exists will soon follow the opening of the line. It will no doubt confer very great benefits on the central provinces.

10. The following table gives the length of each separate undertaking, and the extent opened:—

Railway.	Gauge.	Length of Line sanctioned.	Length opened during 1875.	Total Length opened.	Portion laid with Double Line.	Length remaining to be finished.
East Indian - { Main line - Jabalpur line- }	5' 6"	1,280	—	1,280	414½	—
		223½	—	223½	—	—
Great Indian Peninsula - - -	5' 6"	1,278½	—	1,278½	327	—
Madras - - - - -	5' 6"	856½	—	856½	—	—
Bombay, Baroda, and Central India -	5' 6"	408	—	408	21½	—
Scind, Punjab, and Delhi - - -	5' 6"	663½	—	663½	4½	—
South Indian - - - - -	8' 3½"	617½	97½	283½	—	334½
Eastern Bengal - - - - -	5' 6"	159½	—	157½	—	—
Oudh and Rohilkund - - - - -	5' 6"	711	8	542½	—	168½
Nalhati - - - - -	4' 0"	27½	—	27½	—	—
Calcutta and South-eastern - - -	5' 8"	28	—	28	—	—
Northern Bengal - - - - -	3' 3½"	358½	—	—	—	358½
Punjab Northern - - - - -	5' 6"	267½	62 (Temporary Line.)	62	—	267½
Indus Valley - - - - -	5' 6"	508	—	—	—	508
Rajputana (Agra and Delhi to Nasirabad) - - - - -	3' 3½"	402	48½	379½	—	22½
Neemuch (Indore to Neemuch) - - -	3' 3½"	302½	—	—	—	302½
Indore to Khandwa (Holkar's) - - -	3' 3½"	85½	20½	87	—	28½
Patri branch of Bombay, Baroda, and Central India Railway - - -	5' 6"	22½	—	22½	—	—
Wurdha Valley - - - - -	5' 6"	76	—	18	—	58
Tirhut - - - - -	3' 3½"	93	—	42	—	49
Rangoon and Irrawaddy Valley - - -	3' 3½"	371	—	—	—	371
Sindia (Agra to Gwalior) - - - - -	5' 6"	72	—	—	—	72
West Rajputana - - - - -	3' 3½"	314½	—	—	—	314½
Nagpur and Chattisgarh - - - - -	3' 3½"	123½	—	—	—	123½
BERRAR.						
Khamgaon - - - - -	5' 6"	7½	—	7½	—	—
Amraoti - - - - -	5' 6"	5½	—	5½	—	—
NIZAM'S GOVERNMENT.						
Wadi to Hyderabad and Secunderabad	5' 6"	121	—	121	—	—
PROVINCIAL.						
Mutra and Hathras - - - - -	3' 3½"	30	30	30	—	—
Total - - - - -		9,215½	261½	6,497½	768	2,978½

11. The following statement exhibits the annual progress made in the construction of railways since their commencement:—

Railways.	Length of Line open at the end of each Year.																						
	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.
East Indian Railway (including Jabalpur).	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Indian Peninsula.	21½	34½	50½	88½	88½	104½	245½	297½	437½	404½	553	534½	701½	810½	852	875½	973½	1,257½	1,271½	1,277½	1,278½	1,278½	1,278½
Madras.	—	—	—	05½	80½	95	95	136	297½	447	447	571	611	645	645	677½	707½	782½	631½	631½	857½	857½	850½
Bombay, Baroda, & Central India.	—	—	—	—	—	—	—	35	138	185	185	305½	305½	305½	305½	305½	307½	307½	349½	338	369½	406½	408
Scind.	—	—	—	—	—	—	—	—	108½	105½	105½	105½	105½	108½	108½	108½	108½	108½	108½	105½	105½	105½	105½
Punjab.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delhi.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Southern of India, now South Indian.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carnatic, now South Indian.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Bengal.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oudh and Rohilkund.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Calcutta & South-eastern.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Punjab Northern.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nalhati.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Khamsaon.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amraoti.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rajputana.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Holkar.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Patil.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wardha Valley.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tirhut.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nizam's.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Muttra & Hathras.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total.	21½	72	171	274½	289½	430½	624½	836½	1,581½	2,351½	2,516½	2,902½	3,368½	3,568	3,936½	4,019½	4,261	4,706½	5,072	5,302½	5,671½	6,201	6,497½

* The Great Southern of India Railway has, on re-measurement, been found to be 167 miles only.

† Temporary Line.

12. There are two provinces in British territory which are still beyond the reach of railway influence, but which might with the help of the navigable river running through them, be brought, without much expense, into regular communication by steam with the rest of India. I mean Assam and Cachar. The Brahmaputra passes the terminus of the Eastern Bengal Railway in its course from Debragan, the capital of Assam, which, nevertheless, is as distant, in point of time, from Calcutta as Bombay is from London. What is wanted is a regular and expeditious line of steamers, to work in communication with the railway. The service is now tedious and unreliable; and this discourages the outlay of capital in a fertile province where tea can be successfully grown, and where there is room for great agricultural and mineral development.

Communication with Assam and Cachar.

13. The principal event of the year requires a passing notice in connection with its effect upon the railways. The greater part of the travels in India of His Royal Highness the Prince of Wales was necessarily performed on the railways, and we may rejoice that they contributed to the success of this brilliant and beneficial Royal progress. When at Bombay in November, His Royal Highness went by the Great Indian Peninsula Railway to Poona and back, and to Baroda and Mehmabad on the Bombay, Baroda, and Central India Railway. In December, after visiting Ceylon, he landed at Tuticorin, travelled from thence to Madura and Trichinopoli and formally opened that portion of the South Indian line. From Trichinopoli he proceeded by Erode to Madras on the Madras Railway. In January His Royal Highness travelled from Calcutta to the station on the East Indian Railway opposite Benares, crossed the River Ganges at that place, and went by the Oudh and Rohilkund Railway to Lucknow and Cawnpore. From thence he proceeded to Delhi by the East Indian Railway, and on to Lahore by the Scind, Punjab, and Delhi Railway. When there he went by the Punjab Northern State Railway to Wazirabad and back, performing the ceremony of driving the last rivet for the completion of the bridge over the Chenab River. Returning to Agra His Royal Highness went to Bhurtpore and back, and to Jeypore and back, in February, by the Rajpootana State Railway. Proceeding from Agra

Prince of Wales' visit.

to Alligurrh, he again travelled on the Oudh and Rohilkund Railway to Moradabad, on his way to the Terai and Nepal, and came back by Bareilly to Cawnpore in March. From thence he returned by the East Indian and Great Indian Peninsula Railways to Bombay, viâ Allahabad and Jabbalpore, stopping on his way at Khundwah, and travelling over the open line of the Holkar State Railway, on his way to Indore.

14. His Royal Highness on several occasions personally expressed his satisfaction with the arrangements. After his departure, the Government of India reviewed the railway service thus performed, and concluded their observations with the following resolution:—

“Taking into consideration the length of the journeys, aggregating in all 4,829 miles, performed by His Royal Highness the Prince of Wales on Indian Railways, and the difficulties with which the railway authorities had to contend, consequent on an augmented traffic at a time when efforts were needed to ensure the safety of the Royal train, and the personal convenience and comfort of His Royal Highness the Prince of Wales, the Governor-General in Council is pleased to record his high appreciation of the services rendered by the railway officials of all ranks.

“This good result has been attained both by the well considered arrangements and comprehensive directions of those in chief authority and by the loyal exertions of all the members of the different railway departments.”

15. Among the benefits arising from the visit to India of His Royal Highness the stimulus which was given to travelling on the railways to all classes of natives, and the direct pecuniary return derived from the movement of large bodies of people from one place to another to greet His Royal Highness, must not be overlooked.

Flood
damages.

16. The rainy season of 1875 did not pass without damage being inflicted on railway works by the floods. The large bridges on the Northern lines remained unaffected, showing, it is hoped, that the protective works had rendered them safe; but both on the Great Indian Peninsula Railway, near Jabalpur (between Chhindwara and Narsinghpur), and on the Punjab and Delhi line (between Amritsir and Jullunder), portions of the line, including culverts and small bridges, were washed away, causing interruptions to the traffic and considerable expense in making the necessary repairs and alterations.

17. The most formidable injury was sustained by the Eastern Bengal Railway, at its northern terminus. It will be recollected that fears were entertained for the safety of Goalundo, in consequence of the threatened encroachments of the River Ganges, and that measures had been taken at a large cost to protect the station by means of a spur which had been thrown out into the river 500 feet. The effects of this work upon the floods of 1874 were considered satisfactory, and it was expected that, by making certain alterations in its shape, and by giving it greater strength, the eroding action of the two great rivers which meet at this point would be overcome or diverted. Early in August last, however, all these hopes were destroyed. “Owing to heavy and prolonged rains throughout the upper sources of the Ganges and its tributaries, that river rose to an unprecedented height, and began rapidly to cut into the right bank above Goalundo, and to cause grave apprehension of the early destruction of the works there.”* On the 17th August the demolition of the station was ordered in anticipation of the early collapse of the protective works. The buildings were accordingly removed, and the inhabitants sent further away from the river. This was done just in time, for on the 23rd the protective works were cut through by the water; and five days after the spur had disappeared, the land on which the station stood being completely washed away. When I was there in January, the rivers were, of course, almost at their lowest. About half a mile from the bank, what appeared a small rock rising out of the water could be seen, and this was the remains of the spur. Between it and the shore, the space on which the station stood last year, the depth of the river was about 30 feet, and steamers were loading and unloading within a couple of yards of the newly formed river bank.

18. On the Bombay, Baroda, and Central India Railway, the large bridge over the Sabarmuttee River, near Ahmedabad, 1,125 feet long, and consisting of 18 spans, was washed away by the floods of last season. It has already been replaced by one on a higher level, which was commenced in December, and opened for traffic on the 19th May. This expeditious completion of so important a work reflects great credit upon the engineering department of the railway.

* Despatch from Government of India, 2nd September 1875.

PROCEEDINGS IN THIS COUNTRY.

19. The proceedings in this country connected with the railways have been of the usual kind. The following tables exhibit the shipping operations. It will be seen that 288,186 tons of materials were despatched during the year, of which 124,192 consisted of fuel. During the 25 years since the railways were commenced, 5,181,721 tons of goods, of the value of 34,660,460*l.* have been shipped in 8,495 ships, 75 of which have been wrecked on the voyage. Last year there was no casualty.

SHIPPING OPERATIONS, exclusive of Fuel, during 1875 on Account of Guaranteed and State Railways.

Railway.	Number of Ships employed in 1875.	Number of Tons of Goods shipped in 1875.	Value of Goods shipped in 1875.	Amount paid for Freight and Insurance in 1875.	Average Rate of Freight and Insurance per Ton.
			£	£	£ s. d.
		Tons.	£	£	£ s. d.
East Indian	45	9,745	104,267	10,532	1 1 7
Great Indian Peninsula	43	7,103	85,192	13,558	1 18 2
Madras	37	12,905	71,392	18,610	1 8 10
Bombay, Baroda, and Central India	31	1,168	17,002	2,523	2 3 2
Scinde, Punjab, and Delhi	10	1,796	26,561	4,212	2 6 10
South Indian	42	46,359	436,412	63,003	1 7 2
Eastern Bengal	13	4,821	21,119	7,078	1 9 4
Oude and Rohilkund	27	1,320	32,040	2,272	1 14 5
State Railways	173	78,980	608,453	97,841	1 4 9
Total	421	163,997	1,402,438	219,629	1 6 9

AMOUNT and COST of COAL and other FUEL sent out from this Country in 1875.

Railway Company.	Number of Tons supplied from England.			Total original Cost.			Sum paid for Freight and Insurance.	Average Cost of each Ton when bought in England.			Average Cost of each Ton delivered in India.		
	Of Coal.	Of Coke.	Of Patent Fuel, &c.	Of Coal.	Of Coke.	Of Patent Fuel, &c.		Of Coal.	Of Coke.	Of Patent Fuel, &c.	Of Coal.	Of Coke.	Of Patent Fuel, &c.
East Indian	—	601	—	1,723	—	—	—	—	—	—	—	57 4	—
Great Indian Peninsula	82,532	—	—	57,711	—	—	94,835	14 0	—	—	36 11½	—	—
Madras	4,799	3,014	2,907	3,432	2,563	2,125	13,989	14 3	17 0	14 7	37 6	47 0	41 5
Bombay, Baroda, & Central India	17,253	—	3,06£	29,996	—	6,132	Included in price.	34 10	—	40 0	—	—	—
Scinde, Punjab, and Delhi	4,080	173	—	8,044	790	—	—	39 5	—	—	39 3	91 4	—
South Indian	5,192	394	—	3,452	384	—	5,822	13 3	20 0	—	35 8	48 7	—
Eastern Bengal	201	—	—	201	—	—	126	20 0	—	—	32 6	—	—
Totals	114,037	4,182	5,978	104,569	3,737	8,257	—	—	—	—	—	—	—

SHIPMENTS FROM THE COMMENCEMENT.

Period.	Number of Ships employed.	Number of Ships lost.	Number of Tons of Goods shipped.	Amount paid in England for Goods shipped.
Up to end of 1860	2,605	39	2,094,686	£ 10,431,976
In 1861	407	—	181,621	1,669,443
" 1862	280	1	188,013	1,487,582
" 1863	279	2	166,840	1,285,464
" 1864	283	—	102,318	1,018,164
" 1865	442	2	199,157	1,729,543
" 1866	581	7	312,227	2,527,757
" 1867	512	5	333,329	3,052,652
" 1868	364	3	188,858	1,849,554
" 1869	455	1	211,750	1,432,784
" 1870	461	1	263,449	1,688,209
" 1871	307	6	168,049	707,765
" 1872	318	1	66,534	655,822
" 1873	404	2	201,590	1,561,602
" 1874	426	5	265,114	2,042,136
" 1875	421	—	288,186	1,518,991
Total	8,495	75	5,181,724	34,659,444

20. The proprietors have increased in number from 62,300 to 62,608. The insignificant number of those who held stock or shares in India has become still less: the Europeans being reduced from 448 to 407, and the natives from 416 to 390. The proportion of stock held in India is 1·56 per cent. of the whole.

Railway.	Number of Shareholders on 31st December 1875.						Number of Debenture Holders.		Total Number of Proprietors on the 31st December 1875.
	Registered in England.			In India.			Bonds.	Stock.	
	With Stock or Shares to the Amount of 1,000L. and upwards.	With Stock or Shares of less Amount than 1,000L.	Total in England.	Europeans.	Natives.	Total in India.			
East Indian	7,285	8,516	15,751	128	155	278	625	665	17,519
Great Indian Peninsula	5,553	7,574	13,127	112	134	246	584	1,462	15,369
Madras	2,991	4,262	7,258	—	—	—	181	—	7,434
Bombay, Baroda, and Central India	2,460	3,801	6,261	10	40	50	*52	—	6,363
Scinde, Punjab, and Delhi	3,410	5,340	8,750	71	13	84	—	—	8,834
South Indian	921	1,449	2,370	—	—	—	—	132	2,502
Eastern Bengal	615	1,023	1,638	22	24	46	26	199	1,909
Oude and Rohilkund	1,069	1,377	2,446	69	24	93	—	139	2,678
Total	24,354	33,342	57,596	407	390	707	1,418	2,797	62,608

* An allotment of 200,000L. is represented by one of this number.

NUMBER OF LOCOMOTIVES and VEHICLES owned by the GUARANTEED RAILWAY COMPANIES.

Railway Company.	Locomotives.			Passenger Carriages.		Goods Trucks and Waggons.		Total Number of Vehicles on 31st December 1875.
	Former Number.	Added or With-drawn in 1875.	Total Number, 31st Dec. 1875.	Former Number.	Added in 1875.	Former Number.	Added or Deducted in 1875.	
East Indian	518	3	515	924	30	6,664	—	7,618
Great Indian Peninsula	345	—	345	1,309	3	6,684	3	7,998
Madras	126	2	128	383	—	3,200	5	3,588
Bombay, Baroda, and Central India	85	—	85	233	62	2,808	69	3,034
Scinde, Punjab, and Delhi	156	—	156	509	—	2,959	36	3,504
South Indian	26	35	60	91	135	373	563	1,162
Eastern Bengal	43	—	43	158	9	705	2	874
Oude and Rohilkund	62	—	62	243	79	631	456	1,409

PERSONAL INSPECTION.

21. Since my last Report was written I have, with your Lordship's permission, personally visited all the railways in India, and have thus had the opportunity of witnessing the work they are doing and of judging, better than I could before, of the work which they may be expected to perform. I had the advantage of travelling, during the greater part of my tour, with Mr. Rendel, the consulting engineer to this Office and to the East Indian Railway Company, who had been twice before to India and who, on this occasion, had been deputed by his Board to inspect that line and to report on several matters connected with its condition and working.

Personal
visit to
India.

22. Wherever we went we received every possible assistance and the greatest courtesy, both from the officers of Government and of the Companies, whether while pursuing our journey or in prosecuting our enquiries.

23. One change which has been produced in India by steam power cannot perhaps be better illustrated than by the fact that within the time which forty years ago it would have taken to communicate by letter between London and Calcutta we were enabled to go to India and back and to traverse the length and breadth of the land, from Tuticorin and Beypore in the south to Multan and Jhelum in the north; visiting, on our way, most of the important cities, including Madura, Trichinopoly, Bangalore, Hyderabad, Poonah, Ahmedabad, Baroda, Jabalpur, Benares, Allahabad, Cawnpur, Lucknow, Agra, Delhi, Ajmere, and Lahore; remaining several days at Calcutta, Madras, and Bombay; stopping to view the new and rising industries of the country, such as the coal mines of Wurrora, Mopani, and Kurhurballi, the iron works of Raneegunge, and the factories at Bombay, Surat, Broach, and Calcutta; and mounting several hill stations and sanatoriums.

24. Speedy communication is, however, a small part of the work which is being accomplished by railways. They are producing a most important and beneficial influence over the moral and material interests of the people: and they are furnishing those who are responsible for the government of the country, with the most effectual means of establishing peace and security. On political and strategic as well as on social and commercial grounds their extension therefore is greatly to be desired. But no extensive ramification of the railway system can be successfully carried out without the exercise of the utmost economy and circumspection. The lines must be constructed at the lowest possible cost and selected and laid out with the greatest judgment.

Value of
railways.

25. With regard to the existing lines, we found, generally, that they were in good condition. Here and there portions had been allowed to fall below a high standard of efficiency, but the permanent way was, as a rule, in proper order and the work of maintenance well attended to. Some lines looked better kept and neater than others, and this was, to a certain extent, due to the materials most suitable for ballast being ready at hand. The Madras Railway especially, with its light sand roadway and iron sleepers, was as trim as the drive in a gentleman's park in England. In carrying out so extensive a system as that which now exists, it could hardly have been expected that mistakes would not have been made, and failures would not have taken place, but those which have occurred are, for the most part, the mistakes and failures naturally arising from inexperience and imperfect data. Alignments, in some cases, might have been better, and the works are in some places unnecessarily massive and expensive. In others sufficient water way was not provided; bridges have been insecurely built and their foundations have not only been shaken but undermined by the tremendous force of the floods. These, however, are mostly errors inseparable from vast operations of a novel character in an unknown country. Taking the railway system of India as a whole it cannot but be regarded as a triumph of human industry and skill.

Condition
of existing
lines.

26. And this leads me to dwell for a moment on the character of the work which has been done in India by the Civil Engineer. He had to contend against the forces of nature to a far greater extent than is the case in this island. He had to overcome the difficulties which the gigantic features of the country placed in his way: he had often only poor materials and inferior labour at his command, and he had to meet the dangers of exposure to a burning sun by day and malarious vapours by night. To his skill and professional knowledge he accordingly had to bring more than ordinary courage and endurance. Many have broken down in the attempt, but their places have been immediately filled by others, and the result is exhibited in the thousands of miles of railway which

Work done
by the civil
engineer in
India.

thread their way over mountain passes, cut through thick jungle and span huge and uncertain rivers. Nor is this energy confined to Engineers; in all departments, and in every branch of the service, one cannot but observe a zeal and activity among the officials, which betokens a deep interest in their work.

Stations.

27. The station accommodation is generally good, sometimes perhaps too good, but never unnecessarily spacious. In saying this, I am obliged to except the terminal arrangements of the East Indian Railway at Calcutta, and of the Great Indian Peninsula Railway at Bombay, at both of which stations the accommodation is inadequate and the buildings unworthy of those large concerns. The former is now being put in better order; and the latter is about to be improved by the erection, for the first time, of suitable covered ways and offices. On the lines in Upper India the stations are so constructed that they may be easily fortified in case of need. They are built of brick or stone, and are covered with iron, stone, or tiles, according as materials are available in the districts where they are situated. The stations of the Great Indian Peninsula Railway are especially noted for the tasty manner in which they are laid out. The servants of the company are encouraged to cultivate flower gardens, and they have succeeded admirably. The luxuriant vegetation of the country is also turned to practical account by training creepers, so as to form the sides of sheds many feet high, which are thus left airy, and at the same time protected from the sun and rain.

Locomotive stock.

28. The locomotive stock provided is, in most cases, excessive; while the power of the engines is in many cases below that which present experience would recommend. The adhesion in India is usually good, and it seems to be generally held that a larger cylinder than we are accustomed to use in this country may be utilized there: also that good types for India would be for passenger and mixed trains four-wheel coupled engines with 5' 6" wheels and cylinders 17" diameter and 24" stroke, and for goods six-wheel coupled with cylinders 17" x 24", the wheels being 4' 6" in diameter for goods trains, each pair of wheels having about 11 tons weight upon them.

Metre gauge lines.

29. We travelled over the whole open length of the Rajpootana, and of the South Indian, metre gauge lines, and found them as smooth and as steady as the broad gauge. The carriage accommodation, though necessarily less spacious, was sufficiently commodious, and there was no perceptible difference in the comfort and ease of travelling. This description of railway has not yet been long enough open to enable a reliable conclusion to be arrived at with regard to the cost of working it as compared with the broader gauge lines. The expense of transferring goods from one line to another at the points of junction may be calculated at from 1½d. to 2d. per ton. The contract rate for performing this work at Delhi, where the Rajputana line meets the East Indian and Punjab and Delhi railways, has been Rs. 2 8a. per 1,000 maunds. Inconvenience, to a certain extent, and diminished facilities of transport must of course occur where there is a break of gauge, and it becomes a matter of judgment where, or where not, a break shall be permitted. There are many districts calling out for the means of communication, where even common metalled roads do not now exist, and where a very light and cheap railway would, for generations, be sufficient for the traffic which is likely to come upon it. "If," as Sir John Strachey says, "we can make railways which are self supporting, it is from every point of view advantageous to substitute them for metalled roads. We get far better means of communication: we provide admirable feeders to the great trunk lines of railway, and thereby not only benefit the country, but the financial interests of the Imperial Government, and we at the same time relieve the provincial revenues from a serious burden." The kind of line thus indicated has been laid down between Hathras, a station on the East Indian Railway, and Muttra, on the river Jumna, mainly on the metalled road. It is about 30 miles in length, and has cost Rs. 9,00,000, including rolling stock and stations. Of this Rs. 6,00,000 was provided from provincial revenues, and Rs. 3,00,000 by local subscriptions, chiefly from natives, under a guarantee of 4 per cent. from the local government, and upon the understanding that any excess of receipts beyond this rate shall be divided between the Government and the subscribers.

Management.

30. I need hardly remark that the railways command an enormous power over the interests of the districts through which they pass. It is a power which should be used in a very judicious, enlightened, and I would add enterprising, spirit, not calculating only on the existing condition of things, but taking into account the capabilities of the country, the prospects of future development, and the growing wants and improving habits of the people. To obtain the highest return from the

transport of a limited amount of goods should not be so much the object of railway managers as the conveyance of a large quantity with a comparatively small profit upon each unit.) In some of the fertile valleys through which we passed, the surface of the ground, unbroken by hedge, wall, or fence of any kind, presented, as far as the eye could reach, from the railway embankment, one large sea of rice or corn. In other parts the railway traverses tracts of country where the cultivable area might be increased, and where an external trade might be established, if only a market were accessible for the produce of the land. Opportunities, therefore, in one shape or another, are not wanting of obtaining traffic; but to make railways as serviceable and as profitable as they should be, they must be brought within reach of the people, who, though poor, tenacious, and prejudiced soon become alive to their value, and are quite ready to use them in every possible way, whether for carrying themselves or their goods. The passenger rates have, on some lines, been already reduced, for the lowest class, as far as can be expected. The charges are from a farthing to a third of a penny per mile. The value attached by natives to cheap travelling may be gathered from the fact that they prefer giving up their caste to parting with their pence. The high caste will travel with his lower caste brother rather than pay a higher fare. As regards goods, the natives who engage in trade are keen observers and accurate calculators in matters of business, and command, by some means or other, very accurate information as to prices which prevail in the various markets of the world. The trade up country would seem, at present, to be in the hands of a few. One effect of administering the railways in a broad and liberal spirit would probably be to introduce a wider competition, and to encourage a more general employment of capital. The policy, therefore, to be followed, both in the interests of railway proprietors and of the public, is low rates and simplicity of management; avoiding as much as possible special charges and exceptional arrangements (which only confuse and discourage the uninitiated and the small dealer), and showing a readiness to consider the means, the wants, and usages of the people. It is hardly necessary to add that economy is at the bottom of all reforms and improvements in the direction above indicated. For the rates paid by the customer must always in some degree correspond with the cost of transportation. The more saving there is in managing the traffic, the greater margin will there be for reduction of charges, and thus will a greater stimulus be given to business, and a greater chance of increased profits.

31. It may be said that high and low rates are simply comparative terms which convey no definite meaning. As applied to the circumstances of India, I would describe rates as "high" when they fail to secure the conveyance of the produce of the districts through which they pass or of the goods imported into those districts; when they prohibit or unduly check traffic, and thus restrict trade; when they discourage extended production; and when they raise the cost of conveyance by diminishing the use of the carrying stock. This has been too much the case hitherto; and therefore railways have not yet conferred upon the country the full benefits, nor yielded the profits, which they might have done. The smallest addition to the cost of an article will very often turn the scale as to whether it shall find a favourable market or not. The expense of carriage has necessarily a very important influence on the price at which it can be delivered. The lower the cost of production, the greater is the effect of that influence. This applies especially to corn and other grain, salt, coal, cotton, and almost all the staple commodities of the country. It is very desirable, therefore, to be able to charge such moderate rates as will conduce to the conveyance of large quantities with a small profit on each unit, and thus promote the movement of goods from one part of the country to the other as well as their exportation to foreign lands. As an illustration, I would mention that, at the present moment, in consequence of the low price of wheat* in the provinces of Oude and Rohilkund, and the facilities which the railway gives for conveying it to the port of Calcutta, a larger quantity is being sent to this country and other parts of Europe than has, I believe, ever before been known. In round numbers its cost, including expenses of conveyance, both by land and sea, would on arrival in London be from 38 to 40 shillings per quarter. The price here is about 43s. or 44s. Another advantage arising from low rates is worth adverting to at the present moment. By helping to increase the export of Indian products, they would proportionately promote the demand for silver in India and assist to raise the rate of exchange.

Rates and fares.

* 16s. per quarter.

32. The Oudh and Rohilkund Company when they commenced their traffic arrangements introduced the cheap and simple system; and on other lines improvements have lately been made, both as regards charges and general management, the results of which will, I trust, encourage a further advance in the same direction.

33. As regards the charges in force on the railway just mentioned, they represent, the Company's Agent says, "the freight which the traffic offered can bear." Reduced rates came into operation on the 1st January, and Colonel Jenkins goes on to observe, "it may be confidently asserted that a large increase of traffic was coeval with their introduction and has continued up to the present time." On the Eastern Bengal Railway lower rates for salt were introduced early in the year. An immediate increase of traffic took place, and has been fully sustained ever since: the result being an additional quantity of 66,840 maunds compared with the previous year, equivalent to 101 per cent., the reduction in the charge for carriage having been only 33 per cent.

34. The East Indian Railway Board have not been backward in adopting a liberal scale of charges,* and in a recent letter to their agent, the directors expressed their opinion that "it is now clear that the rates charged for the great staples of produce must be fixed at the lowest possible point," to secure the proper development of the traffic of the country. The Great Indian Peninsula Railway Board have also given practical effect to this doctrine by diminishing rates on grain, and by sanctioning other reductions which, besides simplifying the system of charge, will produce a relief to their customers of about 80,000*l.*, calculated on the revenue returns of the previous year. The Bombay, Baroda, and Central India, and the South Indian Railway Companies have also adopted lower scales of rates for passengers and certain goods. It would thus appear that the conviction is gaining ground that a liberal policy, as regards rates, is the best.

35. Everywhere we found the railway authorities very desirous of securing the comfort and proper treatment of the native travellers. Strict orders are issued for the purpose, as well as for supplying their necessary wants during the journey. Notwithstanding which, crowding and rough handling may sometimes be witnessed. The former is often unavoidable, and is frequently aggravated by the quantity of bundles, to say nothing of children, which the women carry about with them, and which they have to squeeze hurriedly through the small opening of a third-class carriage door. The latter appears to be worse than it really is through the excited and violent gesticulations of the native police and porters. In every train there are separate compartments for females; but men and women frequently travel together. The station arrangements were generally suitable and a good supply of filtered water was always ready. Tables of rates are published in various languages and put up at the booking offices.

36. The accommodation for European travellers is as good as can be expected, and greatly superior to that provided on continental lines. The carriages are commodious and comfortable, and every effort is used to make travelling endurable in the hot season by means of punkahs and other cooling apparatus. But it is difficult to succeed. The heat and dust are very oppressive. The substitution of railway for road travelling must, however, have been a prodigious boon to the European: and those who now reside near the railway must, compared with those who live at a distance from it, experience a feeling of security from the knowledge that in case of illness a change may be at once obtained by stepping into the next train. In former days many an invalid ordered to England who had to proceed several hundred miles from the interior to the port of embarkation must have sunk under the fatigue and exposure to which he was subjected. Frequently were graves pointed out to us on the wayside, where the stricken traveller, overcome by sickness and exhaustion, had found his last resting place. Sometimes it was in consecrated ground, but oftener not. It is difficult to understand Indian distances until they are felt. In those days, weeks were occupied in traversing the plains between the military cantonment or civil station in Central or Upper India and the seaport or the nearest hill sanatorium. Even now, when we see on a map two places on opposite sides of the continent linked together by the railroad, we are apt to forget that two or three nights as well as days are spent on the journey. And when we heard of

* Colonel Hancock, R.E., the Consulting Engineer and Under-Secretary to the Bombay Government, in his minute on the relative working of the East Indian Railway and Great Indian Peninsula Railway, points out as an advantage enjoyed by the former over the latter "that low goods rates have been forced on the East Indian Railway by water competition and that its traffic has prospered in consequence."

Treatment
of Native
passengers.

European
passengers.

Distances in
India.

grain being carried across the river Ganges at Patna to the opposite side by ferry boats, few of us knew that these boats had to go round a distance of thirty miles.

37. The rules in force for securing regularity and safety generally embrace the "line clear" system, by which no train is allowed to leave one station until a message has been received from the next that the train telegraphed as having been last despatched from the former has passed through. The block system is being introduced on the lines where the traffic is large, and this will gradually be extended as necessity arises. The speed of a mail train averages about 30, of an ordinary train 18 to 20 miles an hour. The signalling is much the same as in this country. Fencing, as a rule, is required and is undoubtedly necessary in the neighbourhood of towns and villages; but it is difficult to construct a fence which will effectually keep out animals. In districts with long lengths of straight level line, and where trains pass at a moderate speed, many experienced persons think fencing to be unnecessary. During my journeyings, which extended over 13,000 miles, and took place, sometimes without much notice, at all times of the night and day, we only once came in contact with any obstruction, if a snake which was cut in half and a monkey's tail which suffered the same fate may be excepted. A native Inspector was using a trolley for repairing the line, and while on a curve, had failed to give the proper signals. The trolley was run over and smashed to pieces by our train, which was a special one, but the man had thrown himself off, and suffered no personal injury.

Arrange-
ments for
punctuality
and safety.

38. At certain places on most of the railways, where more Europeans than usual of the mechanical class are brought together, consisting principally of drivers, and those who belong to the locomotive workshops, dwellings are provided which collectively form a kind of railway town. On approaching these places they present quite an imposing appearance. Large square brick houses are seen placed in compounds or gardens bearing a resemblance to the villas and mansions occupied by the wealthy citizens of a London suburb. A closer inspection, however, shows that this impression is deceptive. The grand appearance is produced by the broad verandah, so necessary to an Indian dwelling, and by the double story which was, until lately, rarely seen in India. Each house contains perhaps eight rooms, and these are occupied by several men, some with families, who pay at the rate of from Rs. 9 to Rs. 10 per mensem for each room. In connection with this colony there are generally institutes, libraries, swimming baths, billiard rooms, churches, schools, co-operative stores, hospitals, recreation grounds,—everything in fact that can be thought of to afford occupation for the mind and body. It is very desirable to attend to the health, comfort, and amusement of European mechanics in India as well as to the education of their children. There are great temptations to indulgence and excess, and it is obviously expedient to secure well behaved, steady, and intelligent European communities of this class in the heart of India. This is now the case, and at several stations well disciplined and efficient corps of volunteers have been formed by the railway servants.

European
mechanics.

39. But while Europeans are employed as superintendents, locomotive foremen, drivers, and so forth, the work in the shops is principally performed by natives, whose wages are in about the proportion of annas to rupees compared with Europeans. The management and economy observable in these large workshops reflects great credit on the officers of the locomotive department of the railways, who have established them and who have trained the natives to their present state of efficiency. The swarthy arms of stalwart natives may be seen dealing blows worthy of English strikers at the forge, and the nimble fingers of mere children, directed by sharp eyes, may be seen manipulating minute parts of machinery. Natives are also being gradually trained to manage the locomotive. Many of them fill the position of station-masters, clerks, and assistants to traffic managers, as well as accountants and guards. In order to ensure the efficient discharge of their duties by the railway employes, whether European or native, it is necessary that they should be able to understand each other clearly. The European officers and servants should accordingly enable themselves to communicate with the natives under them in their own language, the acquisition of which colloquially should be a requisite qualification for promotion. Encouragement is now given by the grant of bonuses to those who pass an examination in a native language.

Native ser-
vants.

40. Advantage would, I think, be gained by more frequent intercourse between the chief officers of the various undertakings. Different circumstances bring out different methods, and while a certain uniformity of management is applied to

Intercourse
between
officers in
different
parts of
India.

the railways, it is easy to conceive that, in a country like India, when working out details, the practices in the south may vary from those in the north. Useful hints might be gained from either, but there has hitherto been no systematic attempt to exchange ideas or to communicate information. In my rapid tour I had the opportunity of observing that, on some lines, a better plan was followed than on others with regard to matters applicable to all. Much more would Agents, Traffic Managers, Locomotive Superintendents, and Engineers of long standing in their several departments detect improvements or defects and be able to interchange useful experience and arrive at satisfactory conclusions.

41. As an illustration of the useful effects of this kind of intercourse, I may mention that the Bombay Government was good enough to comply with my suggestion that Colonel White, R.E., the Deputy Consulting Engineer at that Presidency, should accompany me over the Oude and Rohilkund system. Colonel White had been many years in the Railway Department at Bombay, but he had never been further north by railway than Jabbalpur, where the Great Indian Peninsula joins the East Indian Railway. He was now able to compare notes between the lines he was familiar with in the Bombay Presidency and those in Oude and Rohilkund. The results of his observations have been given in an interesting report, which describes the mode in which the railway is managed, and directs attention to various points which he considered worthy of imitation on other lines. Referring to the traffic department of that railway, he says:—

“There are only two classes of carriages, upper and lower. In the upper, or first class, the fare is only nine pies per mile against 15 to 18 pies on other lines; and a reserved compartment, with washing arrangements complete, can be procured for three annas a mile; the charge for this on the Great Indian Peninsula is six annas.

“In the lower class the fare is two pies, and for those who wish to be exclusive, reserved accommodation is procurable for three pies, or a whole bench can be reserved for nine pies: and there are in every train two compartments reserved for poor Europeans or Eurasians who choose to pay the higher three pie fare. On the Bombay lines there is no reserved accommodation in the third-class for Europeans only, and to give such accommodation would entail half a third-class carriage being given up for that purpose; but the Oude and Rohilkund carriages being all built in compartments, the matter is very easily arranged.

“A lower class carriage of six compartments is also reserved for females, but it is optional with them to use this carriage or not; on the Bombay lines the women are forced to travel separately.

“The lower class carriages give almost the same sitting accommodation as the second class on other lines, and in exterior appearance are quite equal to them, the seats are 16 inches wide, with a space between them of 19 inches.

“Speeds, are low, 15 miles an hour, including stoppages, but excepting this there can be no doubt that the Oude and Rohilkund treat their passengers more liberally than any other Indian line; fares are very low and accommodation is good; as far as I could learn, their system meets the wants of the travelling community very well.”

“All the passenger service is given in mixed trains: and passengers travelling by these trains can book their goods at luggage rates, 27 pies a ton, and carry them off with them when they reach their destination. This suits the native mind, which is naturally suspicious, and for the mere advantage of travelling with their own goods, and taking them away with them, thus insuring a little more despatch, many merchants readily pay a rate double as high as that by the ordinary goods train.

“The classification of goods is extremely simple and the rates are low. The classes are special, low, middle, and high, and any trader by an inspection of the rates board, hung up at every station, can tell at once what it will cost him to carry a maund of goods in any one of these classes to any station on the line. The terminal charge, which is one pie per maund, is included in the rate, but no terminal is charged for distances over 60 miles.

“So far, therefore, as the Oude and Rohilkund Railway is concerned, it is an easy matter for any man of ordinary intelligence to find out what it will cost to carry goods throughout any portion of the system: his difficulties, and those of the station clerk too, commence when the goods pass over on to foreign lines, and until the traffics of all Indian lines are far more simple than they are at present, these difficulties will always act in a certain measure as a bar to through traffic. A uniform tariff throughout all Indian railways would be an immense boon.”

42. Thus has this railway been adapted more than any other in India to the wants and usages of the people: and it is very desirable that the success of its arrangements should be known to others. They were started by the late Agent, Major-General Beadle, R.E., and have been improved, as experience was gained, by his successor, Colonel Jenkins, of the Staff Corps.

43. The coal fields at Kariballi, Mopani, and Wurrora, which we visited, presented scenes of great activity and furnished proofs of the progress which the country is making in material wealth. The Bengal coal fields at present yield the greatest quantity and the best quality. It remains to be seen what the mines of Mopani and Wurrora will produce when their operations are more advanced. With good management there would seem to be very fair promise of success. It is very important for the interests of the railways in Central, and I might add Western India, that a supply of good coal at a moderate cost should be obtained from these sources. Coal fields.

44. There are large accumulations of railway stores in possession of all the railway companies, stores which are, to a great extent, not wanted by the particular companies holding them and some of which are unserviceable. At Multan acres of ground were covered with iron bowl sleepers, belonging to the Scinde, Punjab, and Delhi Railway Company. They had been there for years, and a State railway close by had just been constructed with wooden sleepers. The time has arrived when the question, how such surplus stores should be dealt with, may properly be decided. Some systematic plan should be agreed upon for reducing the present stocks and relieving the capital invested in them. It is estimated that the value of stocks now in excess of that which will be required as a standard amount is about 3,000,000*l.* Surplus stores.

45. The State lines are likely to multiply in the future. We went over those which were open for traffic. The most important are the Rajpootana metre gauge lines before mentioned. They are ably managed by Captain Kellow Pye, R.E. With regard to the general administration of the State railways, whether open or in course of construction, the tendency would seem, from what I was able to gather, to be too much in the direction of centralization. This is, perhaps, the natural consequence of direct Government superintendence; but it is one which, besides having a depressing and disheartening effect upon the local officers and their staffs, will interfere with individual responsibility and unduly restrict free and decided action. Another important matter to bear in mind, in connection with these State lines, especially after they have once been commenced, is the necessity for supplying funds to the local officers so as to enable them to carry out their engagements, and to avoid those delays and stoppages which are not only detrimental to the works in hand, but which lead to extravagance and waste in the end. State lines.

46. The construction of feeder roads to stations on the railways is a matter of great importance. The Government regard it as such, and in a minute dated the 21st October 1873, lays down the principle that "The Supreme Government now retains the responsibility for the provision and maintenance of the railway system throughout India, and leaves to the Provincial Governments and Administrations that of the provision of roads." The advantage of constructing roads in the neighbourhood of railways as feeders to them is pointed out and the belief is expressed that "expenditure on such roads will afford a more effective and economical result than outlay in any other direction." The native princes through whose territories railways have been constructed, with the help of Government, are also encouraged to adopt the same course. It is to be hoped that this policy will be effectual, but there are still complaints of the want of good roads to stations. The Lieutenant-Governor of the North-West Provinces has taken up the question, and has decided to commence, during the present year, "certain changes which, followed up, will tend year by year towards a systematic plan of roads, feeding directly the railway, or subserving the commerce" of those provinces. Feeder roads.

47. The extension of the railway system has naturally attracted attention to the importance of obtaining, if possible, a supply of iron from native sources. While iron ore exists in several districts in India, its quality or the situation of the beds in which it was found has not favoured its manufacture. Hitherto the cost of conveying the iron to the nearest market would have been greater than the article could bear. But as railways approach the localities and the means of transport is thus provided, one obstacle is removed. The supply of fuel and of proper fluxes has also been a difficulty which further research and the connection Manufacture of iron in India.

of various districts containing the necessary materials may remove. In 1872, Mr. Bauerman, an experienced mineralogist, visited the various places in India where iron ore was known to exist as well as the localities where coal is found, with the view of ascertaining the prospect of successfully producing iron. Previously to leaving India he made a brief report on the result of his examinations, in which he remarked, "The problem to be solved is not a simple one, as there appears to be no single locality in which all the requisites for the production of iron can be obtained to advantage on the spot. The Kumaon Works seem to be the most favourably situated in this respect, but Mr. Ramsay, the late manager, has left on record his opinion that cupra ores are necessary to make iron profitable, and that information is required as to the capacity of the forests for yielding wood and charcoal for carrying on the works on a large scale without being destroyed." Mr. Bauerman also alluded to the question of conveyance, and stated that in his opinion "very much lower rates would be necessary than those now charged by the Railway Companies for the carriage of minerals." The only iron works now in operation are at Raneegunge. They are in the hands of a company which has the command of a good supply of lime. Smelting was commenced in the spring of this year, but sufficient time has not yet elapsed to enable a report to be made of the result. It is to be hoped also that the old Kumaon Works will soon be again revived, when railway communication advances nearer to them.

Military use
of railways.

48. Towards the end of the year, a committee was appointed by the Commander-in-Chief, Lord Napier of Magdala, of which Lieutenant-General Sir Charles Reed, K.C.B., was the president, to consider how railways can be made most available for military use in India. As a preliminary step experiments were made at Delhi under Sir Charles Reed's directions with the vehicles of the Sindh, Punjab, and Delhi line. "A squadron of the 10th Hussars, and 123 horses, including officers' chargers, 68 grass-cutters ponies, with baggage, camp equipage, ammunition, doolies, &c., fully equipped for field service, were embarked in high-sided waggons, and the train ready to start in 39 minutes. The unloading and fixing of horse ramps took $2\frac{1}{2}$ minutes and dismantling and re-loading ramps $1\frac{1}{2}$ minutes. . . . The baggage was brought alongside covered goods waggons on 80 camels, the weight being 674 maunds. By heaping up the baggage from the line of rail to the side doors of the waggons, a ramp was thus formed; and the whole, including camp equipage, &c., was loaded in 27 minutes, with the aid of a working party of 25 infantry." Orders were then given to move the train across the Jumna. When the train was pulled up, the waggons were disconnected, ramps fixed at either end, and the horses and men were out and ranged along the railway bank in 28 minutes. Re-embarking was accomplished in 32 minutes and the dis-embarkation, on the return of the train to Delhi, in 27 minutes.

49. Another experiment was made with an Armstrong battery. "The whole battery, consisting of three 40-pounder Armstrong guns, two 8-inch and two $5\frac{1}{2}$ -inch mortars, with seven waggons, two store carts, 134 bullocks, including camp equipage, baggage, &c., fully equipped for active service, were embarked and ready to move in 40 minutes. . . . The train reached Ghazecabad (about ten miles distant) safely without a single mishap, and proving satisfactorily that the floors, springs, and bolts of the Sindh, Punjab, and Delhi Railway trucks were fully equal to this severe test. The guns and bullocks were disembarked, the first gun being brought into action by the side of the line in eight minutes, the second in 13 minutes, and the third in 24. These three guns were reloaded in $12\frac{1}{2}$ minutes, showing thereby what could be done with a little practice." The ramps and girders designed by Sir Charles Reed for the end-loading system were generally approved of. This system is strongly advocated by Sir Charles Reed, and there appears to have been a general concurrence of opinion that it is very well adapted for military purposes. The only doubt was whether waggons so constructed would be equally suitable for their ordinary commercial purposes, and the railway members of the Committee, with the exception of Mr. Henry P. Le Mesurier, C.S.I., the Agent of the Great Indian Peninsula Railway, made objections to the proposed alteration in the rolling stock, on the ground that the vehicle would be weakened and rendered less serviceable. This difficulty, however, will probably be got over; but as the cost would be considerable, the change, if applied generally, should be gradually proceeded with. The experiments above described were confined to the 5' 6" gauge, as no vehicles of the metre guage were available.

ACCIDENTS.

50. During the year 1875 one very serious accident happened, by which nine passengers were killed and 13 were injured. Other passengers have lost their lives while travelling, but this was the only case which occurred from causes beyond the control of the sufferers. It took place on the 14th August, on the Jubbulpore branch of the East India Railway, and is thus officially reported: "The engine of a down mail from Jubbulpore left the rails when going at high speed about three miles from Katnee, and the carriages over-rode each other and became a complete wreck except from in the rear, the line for a distance of 50 or 60 yards being completely broken up. The accident is supposed to have been caused by the engine running over the cow-catcher which had worked loose and dropped on the rails."

51. It will be seen by the following Tables, which were prepared in India, that the number of passengers who, during the year, were killed through their own misconduct or want of caution was nine, and that 28 were injured from similar causes. One was a prisoner who attempted to escape by jumping out of the train. The most fertile cause of accidents is the attempt on the part of passengers to get out of the trains while they are in motion.

52. Of railway servants, eight were killed and 25 injured from causes beyond their control: and 93 were killed and 173 injured by preventible causes. Seventy-two persons were run over and killed while trespassing, and eight were injured in the same way. The large number of accidents from this cause would seem to indicate that the danger incurred by trespassers is hardly understood, and suggests whether greater precautions might not be taken to warn people against walking within the boundaries of the railway.

53. It will be seen that the total number of accidents to trains was 868 compared with 767 of the previous year: that 405 of them were cases of running over cattle which had trespassed: 59 were collisions: 151 were from getting off the proper line, and 148 from a variety of other causes.

TABLE No. 1.

ABSTRACT of the NUMBER and NATURE of the ACCIDENTS and of the INJURIES to LIFE and LIMB which have occurred on all Railways open for Traffic in India during the Year 1875.

Under the Control of the Government of	Mean Mileage Open.	Railways.	Classification of Accidents to Trains, &c.					Passengers.				Servants of Companies or of Contractors.				Others.						Total Persons of all Classes.						
			Main Heads.					From Causes beyond their own Control.		From their own Misconduct or want of Caution.		From Causes beyond their own Control.		From their own Misconduct or want of Caution.		Whilst crossing at Level Crossings.		Whilst trespassing (including Suicide).		Miscellaneous.		Killed.	Injured.	Killed and Injured.				
			I. Collision.	II. Getting off proper Lane.	III. Fire.	IV. Running over Cattle.	V. Other Causes.	Total.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.								
India	1,508	East Indian	1875	4	1	8	181	13	157	9	16	6	13	3	3	25	46	2	1	36	4	6	—	—	87	82	169	
	1,503		1874	96	21	20	184	6	267	1	18	8	17	1	13	27	70	8	1	51	10	7	—	—	103	132	235	
	158	Eastern Bengal	1875	—	2	—	7	—	9	—	—	—	3	—	1	5	13	—	—	4	—	—	—	—	9	17	26	
	158		1874	1	—	—	1	—	2	—	—	—	1	—	—	6	9	—	—	1	—	—	—	—	7	10	17	
	542	Oudh and Rohilkhand	1875	17	32	8	51	15	123	—	—	3	2	4	4	9	19	1	—	4	—	—	—	—	21	25	46	
	524		1874	5	7	12	18	13	55	—	1	—	1	1	1	7	7	—	—	5	—	—	1	1	14	18	32	
	553	S. P. & D. Punjab Section.	1875	7	7	6	5	9	34	—	1	—	5	—	—	5	6	—	—	6	—	—	—	—	—	11	13	24
	556		1874	6	14	19	4	14	57	—	1	—	1	—	—	4	4	—	—	6	1	—	—	—	11	7	18	
	109		Sind Section.	1875	—	1	10	15	18	44	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	2	3
	109	Calcutta and South-eastern (State).	1874	—	—	—	—	—	17	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
	28		1875	2	4	—	31	—	87	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2	2
	27	Nalhati	1875	—	—	1	4	1	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3
	27		1874	—	1	1	2	2	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	6	10
	844	Rajputana	1875	4	20	2	31	37	94	—	1	—	1	—	—	8	4	—	—	1	—	—	—	—	—	4	6	10
	178		1874	2	19	—	12	10	43	—	—	—	—	—	—	9	2	—	—	2	—	—	—	—	—	11	2	13
	56	Holkar	1875	3	46	15	9	8	81	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	2	2	4
	36		1874	1	1	—	—	—	2	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	1
	62	Punjab Northern	1875	—	1	2	6	—	9	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	3	8
—	1874		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
44	Tirhut	1875	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
—		1874	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
856	Madras	1875	6	7	34	41	6	94	—	2	—	—	2	—	5	12	1	—	2	—	—	—	—	—	8	16	24	
856		1874	1	18	19	48	6	92	—	—	1	1	3	6	6	7	—	—	5	—	—	—	—	—	17	14	31	
218	South Indian	1875	1	—	1	13	6	21	—	—	—	—	—	—	—	1	—	—	2	—	—	—	—	—	2	1	3	
186		1874	—	2	—	22	—	24	—	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	1	2	3	
1,420	Great Indian Peninsula (a).	1875	12	31	17	36	29	125	—	4	—	2	1	12	35	61	1	2	9	1	3	3	3	49	95	134		
1,420		1874	12	15	11	45	23	106	—	28	—	1	7	12	22	29	1	—	5	2	3	3	3	38	70	108		
450	Bombay, Baroda, and Central India (b).	1875	5	8	1	32	1	42	—	—	—	1	—	8	5	10	2	—	6	—	—	—	—	—	13	14	27	
444		1874	2	—	—	25	5	32	—	—	2	1	1	2	10	11	1	1	2	3	—	—	—	—	16	19	35	
Total Indian Railways	6,373	—	1875	59	151	105	405	148	868	9	28	9	28	8	25	98	175	7	2	72	8	10	6	208	267	475		
	6,022		1874	68	103	92	407	97	767	1	43	12	27	18	41	98	140	11	2	77	16	14	9	221	278	499		

(a) Includes Wardha Valley, Nizam's, and Berar State Railways.

(b) Includes Dubhoe Branch Railway.

TABLE No. IV.

Showing the TOTAL NUMBER of ACCIDENTS to PERSONS of all kinds, and to TRAINS, &c., on all RAILWAYS open for TRAFFIC during the Year 1875.

Under the Control of the Government of	Mean Length of Railway open.	Total Number of Train Miles.	Train Miles per Mile open.	Passenger Mileage.	Passenger Mileage per Mile open.	Total Number of Accidents to Trains, &c. of all kinds.	Total Number of Passengers carried.	Average Number of Passengers per Mile open.	Passengers.		Servants.				Trespassers, &c.		Total.		
									Killed.	Injured.	Beyond their own Control.		Within their own Control.		Killed.	Injured.	Killed.	Injured.	Killed and Injured.
											Killed.	Injured.	Killed.	Injured.					
India -	1875	8,428½	9,430,987	2,750	—	586	14,867,165	4,190	18	43	7	8	48	91	63	9	186	151	287
	1874	8,115½	10,808,722	3,470	—	518	13,094,692	4,206	10	42	2	21	55	98	82	17	149	178	322
Madras	1875	1,075	2,451,153	2,280	182,330,714	169,610	4,277,304	3,979	—	1	—	2	5	13	5	1	10	17	27
	1874	1,042½	2,236,347	2,144	183,890,849	176,242	4,305,233	4,128	1	3	3	6	6	7	6	—	18	16	34
*Bombay	1875	1,870	5,506,837	2,945	—	—	7,513,143	4,018	—	7	1	15	40	71	21	6	62	99	161
	1874	1,864	4,942,384	2,651	—	—	7,153,695	3,838	2	25	8	14	32	40	12	10	54	89	143
Total -	1875	6,373½	17,388,977	2,728	—	—	26,157,612	4,104	18	51	8	25	98	175	89	16	208	267	475
	1874	6,022½	17,982,408	2,987	—	—	24,553,620	4,079	13	70	13	41	93	140	102	27	221	278	499

* Includes the Wardha Valley, the Nizam's, and the Berars State Railways, which are worked by the Great Indian Peninsula Railway Company, and the Dubhoe Branch which is worked by the Bombay, Baroda, and Central India Railway Company.

CAPITAL.

54. The total amount of capital expended on railways in India to the 31st December last as regards State lines, and to the 31st March last as regards guaranteed lines, was 105,790,929*l.* Of this, 93,720,794*l.* was defrayed from guaranteed Share Capital, Debentures, or Debenture Stock issued by the companies, and 12,070,135*l.* was expended direct by the Government. During the year to the 31st December last, the expenditure on State lines was 2,760,940*l.*, of which 2,084,297*l.* was expended in India, and 676,643*l.* in England; and in the year to the 31st March last guaranteed capital is estimated to have been spent to the extent of 1,279,000*l.* The capital which has been raised by the companies under the guarantee amounts to 95,072,441*l.*, of which 83,697,322*l.* is Share Capital, 5,691,570*l.* Debentures (299,520*l.* being convertible into shares), 5,129,878*l.* Debenture Stock, and 553,671*l.* capital not bearing interest. Full particulars are given in the tables at pp. 23 to 27 prepared in the office of the Accountant. The following list shows the different rates of guaranteed interest paid by Government:—

	£
Share Capital at 5 per cent.	81,923,520
Do. do. 4 $\frac{3}{4}$	1,273,802
Do. do. 4 $\frac{1}{2}$	500,000
Debentures 5	1,380,370
Do. do. 4 $\frac{1}{2}$	183,450
Do. do. 4 $\frac{1}{4}$	2,096,400
Do. do. 4	2,031,350
Debenture Stock 4 $\frac{1}{2}$	1,925,000
Do. do. 4	3,204,878
Capital not bearing interest	553,671
	£95,072,441

The manner in which this money has been approximately expended may be seen by the subjoined statement:—

Railway.	Works and Bridges.	Permanent Way, Stations, &c.	Freight and Insurance.	Rolling Stock and Engines.	Establishments.	Miscellaneous, Electric Telegraph, Stores, &c.
	£	£	£	£	£	£
East Indian - - - -	9,615,000	7,145,000	3,000,000	3,655,000	3,785,000	3,850,000
Great Indian Peninsula - - -	9,430,000	7,574,000	—	2,875,000	1,626,000	1,310,000
Madras - - - -	3,455,000	3,845,000	—	1,108,000	888,000	455,000
Bombay, Barods, and Central India -	3,255,000	2,168,000	—	1,105,236	780,000	459,000
Scinde, Punjab, and Delhi - - -	2,342,000	3,409,000	Flotilla. 376,160	1,958,000	1,090,000	796,000
South Indian - - - -	773,000	916,000	—	296,000	385,000	260,000
Eastern Bengal - - - -	—	2,248,000	Flotilla. 75,000	318,070	837,000	99,000
Oude and Rohilkund - - - -	1,230,000	2,302,000	—	583,000	552,000	617,000

STATEMENT No. I.

STATEMENT OF EXPENDITURE IN ENGLAND AND INDIA ON INDIAN STATE RAILWAYS, appropriated to the various Undertakings as shown in Statements to 31st December 1875, received from India.

State Railway.	Expenditure appropriated.			Classification of Expenditure.												
	England.	India.	TOTAL.	Pre-liminary Expenses.	Land.	Construction of Line.	Ballast and Permanent Way.	Stations and Buildings.	Electric Telegraph.	Plant.	Rolling Stock.	Main-tenance.	Establish-ment.	Con-tingencies.	Suspense Acconnts.	Receipts on Capital Account.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Punjab, Northern	468,749	1,421,608	1,885,352	25,511	22,884	967,740	215,844	46,378	108	107,390	49,518	2,586	827,794	12,502	114,578	
Indus Valley	484,610	1,706,276	2,140,886	61,207	9,637	646,406	475,456	90,938	655	72,961	23,129	1,172	336,402	23,509	403,280	3,516
Hubli and Carwar	2,502	52,792	55,294	4	—	—	—	—	—	—	—	—	53,649	1,641	—	—
Wardha Valley, Coal	38,075	287,921	325,996	8,487	78	74,354	125,231	18,261	—	8,613	241	—	27,858	1,107	62,031	265
Holkar	260,551	707,722	968,273	3,252	4,452	344,716	158,229	45,857	—	29,052	35,914	35	102,917	7,782	239,102	2,985
Neemuch	236,751	273,504	510,255	20,617	27	77,414	76,216	19,829	—	11,761	2,594	57	69,097	4,267	228,318	442
Rajpootana	718,983	1,612,935	2,331,918	25,692	38,481	537,580	874,316	177,791	—	29,855	230,610	62	183,764	10,402	225,88	2,023
Western Rajpootana	—	43,936	43,936	3,578	—	—	—	—	—	2,006	—	—	86,251	1,906	215	20
Nulhatee	30,000	—	30,000	—	—	*30,000	—	—	—	—	—	—	—	—	—	—
Calcutta and South-eastern	268,388	422,418	690,801	6,769	108,507	104,596	155,774	57,164	3,698	8,270	122,458	—	86,773	18,766	18,031	—
Northern Bengal	217,763	449,852	667,615	7,356	28,398	108,243	18,538	15,122	3,236	14,026	169	124	97,509	3,710	372,514	1,330
Scindia	1,148	32,066	33,214	1,841	—	2,193	—	1,819	—	4,801	41	—	20,499	679	1,863	22
Nagpur and Chutesghur	—	8,778	8,778	1,117	—	—	—	—	—	470	—	—	6,978	231	—	18
Tirhoot	89,891	230,493	320,384	1,415	381	66,318	134,807	18,254	—	10,948	34,926	†15,510	26,921	1,859	19,596	4,551
Bangoon and Irrawaddy Valley	66,838	173,011	244,849	1,818	8,587	39,646	58,582	6,102	—	8,434	7,127	—	20,835	781	93,629	143
Bangoon and Sittang Valley	—	3,864	3,864	547	—	—	—	—	—	—	—	—	2,891	170	256	—
Moradabad, Deobund, and Roorkee	—	2,852	2,852	52	—	—	—	—	—	84	—	—	2,616	150	—	—
Hathras and Mutbra Section, Light Provincial Railway.	—	92,551	92,551	92	990	3,019	52,489	10,121	—	173	15,760	—	6,485	165	3,265	4
NATIVE STATES.																
Nizam's	143,975	987,926	1,131,901	1,057	—	396,623	467,990	91,920	—	16,055	9,163	—	110,279	4,724	37,101	3,014
Khamgaum Branch	—	48,530	48,530	37	39	10,921	29,328	4,638	125	343	32	—	2,888	234	—	—
Oomraotee Branch	13,316	30,418	43,734	112	245	9,418	25,259	4,344	110	302	15	—	3,806	123	—	—
Mysore	—	11,624	11,624	550	—	—	—	—	—	831	—	—	9,994	249	—	—
Total	2,936,535	8,606,067	11,592,602	171,111	222,156	3,419,183	2,867,054	603,533	7,927	325,825	581,692	19,496	1,535,651	94,707	1,819,617	25,550

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* This amount was paid to the Oude and Rohilkund Railway Company for purchase of the Line.

† Described in statement received from India as traffic charges.

Note.—The total expenditure in England on State Railways to 31st December 1875 amounted to 3,464,063*l*. The above figures represent only that portion of such expenditure as had been appropriated in India to the several undertakings to the date of the last advices received.

India Office, 23rd May 1876.

T. W. KEITH,
Accountant.

STATEMENT No. 2.

Showing the AMOUNT of CAPITAL estimated to be required for each Undertaking as now sanctioned, the Amount authorised to be raised, the Amount raised, and the Amount withdrawn, to 31st March 1876.

Railway.	Estimated Cost of Lines.	Amount authorised to be raised on 31st March 1876.						Amount raised in England to 31st March 1876.					Amount raised in India to Date of last Advices.		Total Amount raised to 31st March 1876.	Total Amount withdrawn to 31st March 1876 (partly estimated).	
		Share Capital.	Debentures.		Debenture Stock.	Capital not bearing Interest.	Total.	Share Capital.	Debentures.		Debenture Stock.		Capital not bearing Interest.	Share Capital.			Capital not bearing Interest.
			Con-vertible into Shares.	Incon-vertible.					Con-vertible into Shares.	Incon-vertible.	Stock represented.	Cash received.					
East Indian—Main Line	£ 27,750,000	£ 22,885,980	£ 164,620	£ 2,719,850	£ 1,500,000	£ 168,428	£ 27,883,278	£ 22,458,149	£ 164,620	£ 2,719,850	£ 1,500,000	£ 1,500,000	£ 162,090	£ 826,325	£ 1,838	£ 27,332,372	£ 27,156,272
" Jubbulpore Line	£ 3,250,000	£ 3,200,000	—	—	—	£ 48,249	£ 3,248,249	£ 3,189,350	—	—	—	—	£ 48,249	£ 7,665	—	£ 3,240,264	£ 3,413,898
Great Indian Peninsula	£ 24,500,000	£ 20,000,000	—	£ 1,304,250	£ 8,065,300	£ 239,602	£ 24,599,152	£ 19,064,125	—	£ 1,304,250	£ 2,791,450	£ 2,475,559	£ 228,860	£ 405,047	£ 742	£ 23,478,583	£ 22,854,808
Madras	£ 10,500,000	£ 10,212,800	£ 89,600	—	—	£ 9,898	£ 10,312,298	£ 10,193,201	£ 89,600	—	—	—	£ 9,898	—	—	£ 10,292,699	£ 10,090,144
Bombay, Baroda, and Central India	£ 8,000,000	£ 7,550,800	£ 45,800	£ 200,000	—	£ 85,387	£ 7,830,987	£ 7,528,628	£ 45,800	£ 200,000	—	—	£ 85,387	£ 21,672	—	£ 7,830,987	£ 7,776,388
Scinde, Punjab, and Delhi	£ 11,000,000	£ 11,418,900	—	—	—	£ 4,409	£ 11,423,309	£ 10,988,984	—	—	—	—	£ 4,336	£ 86,253	£ 67	£ 11,079,640	£ 10,643,041
Eastern Bengal	£ 3,200,000	£ 2,355,520	—	£ 462,850	£ 411,308	£ 2,288	£ 3,131,466	£ 2,238,996	—	£ 52,650	£ 411,308	£ 374,730	£ 2,288	£ 16,486	—	£ 2,685,150	£ 3,082,136
Oude and Rohilkund	£ 6,000,000	£ 4,000,000	—	£ 1,115,300	£ 384,700	£ 3,352	£ 5,508,352	£ 3,575,581	—	£ 1,115,300	£ 384,700	£ 854,589	£ 3,352	£ 424,419	—	£ 5,473,241	£ 5,818,789
South Indian	£ 4,000,000	£ 3,215,091	—	—	£ 425,000	£ 62,064	£ 3,702,155	£ 3,171,220	—	—	£ 425,000	£ 425,000	£ 62,009	£ 1,221	£ 55	£ 3,659,505	£ 3,385,523
Total.	£ 98,200,000	£ 84,637,991	£ 299,520	£ 5,801,750	£ 5,786,308	£ 532,671	£ 97,129,240	£ 82,408,234	£ 299,520	£ 5,892,050	£ 5,422,453	£ 5,129,878	£ 551,469	£ 1,289,083	£ 2,202	£ 95,072,441	£ 93,720,794

India Office, 12th April 1876.

T. W. KEITH,
Accountant.

STATEMENT No. 3.

SHOWING the AMOUNT received from and withdrawn by each Company during the Year ended 31st March 1876.

Railway.	Sums standing to the Credit of the Companies on the 31st March 1875.	Sums advanced to the Companies on the 31st March 1875.	Amount received						Amount withdrawn					Total received during the Year ended 31st March 1876.	Total withdrawn during the Year ended 31st March 1876.
			In England, between 1st April 1875 and 31st March 1876.				In India, between 1st April 1875 and the Date to which Accounts have been received.		In England, between 1st April 1875 and 31st March 1876.		In India.				
			Share Capital.	Debentures.	Debenture Stock.	Capital not bearing Interest.	In India, between 1st April 1875 and the Date to which Accounts have been received.		On account of Stores, Establishment Charges, &c.	For Discharge of Debentures.	Date to which Accounts have been received.	Amount.	Estimated Withdrawals between Dates specified and 31st March 1876.		
							Share Capital.	Capital not bearing Interest.							
East Indian, Main Line.	£ 480,779	£ —	£ 99	£ 1,000,000	£ —	£ 3,263	£ —	£ —	£ 212,794	£ 1,220,150	31st December 1875	£ 52,903*	£ 72,000†	£ 1,003,862	£ 1,308,041
East Indian, Jubbulpore Line.	—	237,022	37,870	—	—	5,658	—	—	—	—	"	5,860*	14,000†	43,528	19,860
Great Indian Peninsula.	570,147	—	—	—	—	—	—	—	242,916	—	"	96,744*	200,000†	—	53,828
Madras	104,645	—	626,035	—	—	—	—	—	84,550	500,000	"	18,575	75,000†	626,035	528,125
Bombay, Baroda, and Central India.	38,871	—	510	—	—	—	—	—	38,531	—	"	13,754*	45,000†	510	20,223
Scinde, Punjab, and Delhi.	799,631	—	—	—	—	—	—	—	55,081	—	"	307,951	—	—	363,032
Eastern Bengal	—	388,274	—	—	—	—	—	—	30,353	—	"	2,359	30,000†	—	8,712
Oude and Rohilkund	321,430	—	37	—	—	—	—	—	38,844	—	"	88,171	40,000	37	167,015
South Indian	992,118	—	—	—	—	—	—	—	460,429	—	"	205,707	52,000	—	718,186
Total	8,302,621	625,296	664,551	1,000,000	—	8,921	—	—	1,163,498	1,720,150	—	459,502	344,000†	1,673,472	2,999,150

* Transfers of expenditure to Revenue Account, Sale proceeds of Stores, Refunds, &c. exceed by these sums the amounts withdrawn in India on Capital Account during the year.
 † It is estimated that, on receipt of advices from India regarding transfers, which are several months in arrear of advices of cash transactions, transfers of expenditure to Revenue Account, &c. will have exceeded the withdrawals to this extent.

T. W. KEITH,
Accountant.

India Office, 12th April 1876.

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STATE OF DEBENTURE LOANS on the 31st March 1876.

Railway.	Amount.			Rate of Interest	Date at which Loan expires.
	Convertible.	Inconvertible.	Total.		
East Indian	£ 164,620	—		5	9th August 1876.
"	—	96,400		4½	10th August 1877.
"	—	183,450		4½	" "
"	—	1,000,000		4½	22d August 1877.
"	—	440,000		4	19th March 1878.
"	—	1,000,000		4½	1st January 1881.
	164,620	2,719,850	2,884,470		
Great Indian Peninsula	—	1,035,450		5	31st Dec. 1876.
"	—	368,800		4	30th June 1878.
	—	1,304,250	1,304,250		
Madras	89,600	—	89,600	5	1st January 1877.
Bombay, Baroda, and Central India	45,300	—		5	1st July 1876.
"	—	200,000		4	1st January 1882.
	45,300	200,000	245,300		
Eastern Bengal	—	45,400		5	1st November 1876.
"	—	7,250		4	1st November 1884.
	—	52,650	52,650		
Oude and Rohilkund	—	613,300		4	4th June 1880.
"	—	500,000		4	1st August 1881.
	—	1,113,300	1,113,300		
			5,691,570		

India Office,
12th April 1876.

T. W. KEITH,
Accountant.

It will be seen by the above statement that the whole of the Convertible Debentures will be paid off this year. The total amount of Debentures of all kinds now outstanding is 932,570*l.* less than it was last year.

STATEMENT OF WITHDRAWALS out of CAPITAL for EXPENDITURE; showing the Amount withdrawn in England and in India by all the Guaranteed Indian Railway Companies during each Financial Year from the commencement to 31st March 1876.

Year.	England.	India.	Total.
	£	£	£
1849-50	69,211	6,682	75,893
1850-51	61,164	38,099	99,263
1851-52	154,212	197,111	351,323
1852-53	174,920	252,640	427,560
1853-54	252,484	418,165	670,649
1854-55	960,878	769,278	1,730,156
1855-56	1,935,074	1,431,337	3,366,411
1856-57	1,752,813	1,762,287	3,515,100
1857-58	1,328,243	2,094,825	3,423,068
1858-59	1,941,033	3,551,075	5,492,108
1859-60	2,508,668	4,662,796	7,171,464
1860-61	2,388,315	5,190,400	7,578,715
1861-62	1,597,430	5,004,782	6,602,212
1862-63	1,852,393	4,010,951	5,863,344
1863-64	1,415,146	3,340,507	4,755,653
1864-65	1,396,821	2,725,419	4,122,240
1865-66	2,222,679	3,414,187	5,636,866
1866-67	3,958,357	3,339,346	7,297,703
1867-68	3,924,490	3,195,591	7,120,081
1868-69	1,969,814	2,512,084	4,481,898
1869-70	2,298,680	2,444,171	4,742,851
1870-71	1,899,054	1,877,216	3,776,270
1871-72	886,996	1,609,782	2,496,728
1872-73	822,995	345,750†	477,245
1873-74	1,028,032	334,979†	693,053
1874-75	1,174,893	86,982†	1,087,911
1875-76	1,163,498	115,602*	1,279,000*
	41,138,293	53,196,472	94,334,765
Deduct amount withdrawn by the Calcutta and South-eastern Railway Company, this Railway having subsequently become the property of the State	267,362	346,609	613,971
	40,870,931	52,849,863	93,720,794

* These amounts are partly estimated.

† Transfers of expenditure to Revenue Account, Sale proceeds of Stores, Refunds, &c., exceed by these sums the amount withdrawn in India on Capital Account.

Note.—The total expenditure in India in each year as shown in the above Statement will not be found to coincide with that shown in the Indian Finance and Revenue Accounts, owing to the fact that the transfers of expenditure to Revenue Account can only be made in the books in this country on receipt of advices from India, and are consequently brought to account some months later than in the Indian books.

India Office,
12th April 1876.

T. W. KEITH,
Accountant.

GUARANTEED INTEREST.

55. It will be seen by the following tables that the sums advanced by Government to the different companies amounted during the year to 4,650,346*l.*, compared with 4,641,705*l.* of the previous year, and that the whole amount advanced on this account since the commencement of operations is 56,924,522*l.* Of this large sum 31,230,932*l.* had been paid back by the companies, leaving a net amount of 25,693,590*l.*, which the Government had advanced up to the 30th June 1875. During the past year the excess of interest paid by Government over railway receipts was 1,073,832*l.* compared with 1,061,988*l.* of the previous year, and 1,428,442*l.* of the year before.

GUARANTEED INTEREST.—INDIAN RAILWAYS.

STATEMENT of the Total Amount of INTEREST advanced to each of the under-mentioned Railway Companies to the 31st December 1875.

Railway Company.	Interest advanced to 31st December 1874.	Interest advanced during 1875.						Total.
		England.		India.		Total.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
East Indian, Main Line	18,507,137 1 0	1,331,132 3 4	10,417 3 1	1,341,549 6 5	19,848,686 7 5			
" Jabalpore Line	1,718,716 1 7	155,995 9 2	383 5 0	156,378 14 2	1,875,094 15 9			
Great Indian Peninsula	12,436,452 3 4	1,130,431 16 0	13,609 6 0	1,144,041 2 0	13,580,493 5 4			
Madras	6,379,240 9 11	500,335 8 3	—	500,335 8 3	6,879,575 18 2			
Bombay, Baroda, and Central India	4,307,818 11 0	387,023 1 10	244 16 8	387,267 18 1	4,694,686 9 1			
Scinde, Punjab, & Delhi	5,269,191 4 7	551,119 7 6	2,560 7 11	553,679 15 5	5,822,871 0 0			
Eastern Bengal	1,476,985 18 1	130,561 2 6	997 7 10	131,558 10 4	1,608,544 8 5			
Oude and Rohilkund	996,614 14 8	254,030 4 10	4,443 1 3	258,473 6 1	1,255,088 0 9			
South Indian	1,182,419 13 8	177,062 9 7	—	177,062 9 7	1,359,482 3 3			
Total	£ 52,274,175 17 10	4,617,691 3 0	32,655 7 4	4,650,346 10 4	56,924,522 8 2			

India Office, 12th April 1876.

T. W. KEITH,
Accountant.

A STATEMENT showing approximately the AMOUNTS advanced on account of GUARANTEED INTEREST to the several under-mentioned Railway Companies to the 30th June 1875, beyond the amount of Net Revenue applied thereto.

Railway Company.	Total Amount advanced to 31st December 1875.*	Aggregate of Net Revenue Balances for the several half-years to 30th June 1875, inclusive.	Net Amount advanced.
	£	£	£
East Indian, Main Line	19,848,686	15,856,758	3,991,928
" Jabalpore Line	1,875,095	444,184	1,430,911
Great Indian Peninsula	13,580,493	7,284,611	6,295,882
Madras	6,879,576	3,034,271	3,845,305
Bombay, Baroda, and Central India	4,694,687	2,007,681	2,687,056
Scinde, Punjab, and Delhi	5,822,871	935,958	4,886,918
Eastern Bengal	1,608,544	1,085,984	522,560
Oude and Rohilkund	1,255,088	178,792	1,076,296
South Indian	1,359,482	402,748	956,734
Total	£ 56,924,522	31,230,932	25,693,590

* The Interest for the half-year to 30th June 1875 not being paid until the succeeding half-year.

India Office, 12th April 1876.

T. W. KEITH, Accountant.

REVENUE.

56. The net revenue derived from the railways was less than that of the previous year by 320,594*l.* This at first sight does not appear to be satisfactory, but independently of the depression of trade, the falling off is explained by the exceptionally large traffic in grain during 1874, in consequence of the scarcity in Bengal. Last year only 302,719 tons were carried by the East Indian, the Eastern Bengal, and the Punjab and Delhi Railways, instead of 1,217,338 tons in 1874. The gross receipts last year were 7,412,179*l.*, compared with 7,809,984*l.* of 1874, and 6,738,945*l.* of 1873. The receipts from passengers were more by 270,504*l.*, and

from goods they were 586,102*l.* less : from miscellaneous sources they were also 82,307*l.* less. The expenditure was 77,211*l.* less, amounting to 3,764,311*l.*, compared with 3,841,522*l.* of the previous year. The net receipts amounted to 3,647,868*l.*, of which 3,576,514*l.* were from guaranteed and 71,354*l.* from the State lines. Taking the capital of the two to be 97,000,000*l.*, the average earnings, from good and bad together, would be 3*l.* 15*s.* per cent. for the year.

57. The following statement shows the amount of surplus profits earned by guaranteed railways from 1870 to 1875 :—

Railway Company.	Half year to 30th June 1870.	Half year to 30th June 1871.	Half year to 30th June 1872.	Half year to 30th June 1873.	Half year to 31st Dec. 1873.	Half year to 30th June 1874.	Half year to 31st Dec. 1874.	Half year to 30th June 1875.	Half year to 31st Dec. 1875.	Total.
East Indian, Main Line	£ 130,095	£ 109,255	£ 150,695	£ 167,753	£ 104,688	£ 641,832	£ 77,951	£ 158,539	£ 38,702	£ 1,579,570
" Jabalpore Line	—	—	—	—	—	11,238	—	—	—	11,238
Great Indian Peninsula Railway	—	—	—	—	—	—	—	143,838	—	143,838
Bombay, Baroda, and Central India	—	—	5,864	—	—	4,723	—	5,912	—	16,499
Eastern Bengal -	—	—	—	—	8,211	7,810	9,151	—	—	25,372
Total	130,095	109,255	156,559	167,753	113,099	665,603	87,102	308,289	38,702	1,776,457

17th July 1876.

T. W. KEITH,
Accountant.

58. The annual payments on account of guaranteed interest, and the amount paid by the companies in reduction of the same during the last seven official years, have been as follows. These figures vary slightly from those in the preceding page, which apply to the natural, while these apply to the official year.

Financial Year.	Guaranteed Interest.	Net Traffic Receipts less half surplus profits.	Net Charge.
	£	£	£
1869-70	4,176,008	2,628,944	1,547,064
1870-71	4,391,592	2,556,781	1,834,811
1871-72	4,592,166	2,868,948	1,723,218
1872-73	4,658,401	2,547,900	2,110,501
1873-74	4,667,906	3,230,554	1,437,352
1874-75	4,693,884	3,449,322	1,244,562
1875-76 } partly estimated.	4,686,996	3,685,000	1,001,996

STATEMENT showing the REVENUE from the INDIAN RAILWAYS in

Railway.	Receipts.			
	Passengers.	Goods.	Miscellaneous.	Total.
	£	£	£	£
East Indian, Main Line - 1875	801,311	1,622,681	85,671	2,509,663
" " - 1874	742,416	2,350,949	94,280	3,187,645
" Jabalpur Line - 1875	77,300	92,198	15,550	185,048
" " - 1874	68,696	131,146	35,195	235,037
Great Indian Peninsula - 1875	478,530	1,457,666	36,888	1,973,084
" " - 1874	438,544	1,369,990	40,013	1,848,547
Madras - 1875	226,049	344,523	18,820	589,392
" " - 1874	226,369	295,011	20,049	541,429
Bombay, Baroda, and Central India - 1875	228,348	343,382	13,724	585,454
" " - 1874	203,382	304,580	29,068	537,020
Sind, Punjab, and Delhi - 1875	221,458	269,824	20,653	511,935
" " - 1874	199,274	375,638	44,276	619,188
" Indus Steam Flotilla - 1875	5,817	78,525	617	85,029
" " - 1874	5,259	71,163	552	76,974
South Indian (amalgamation of Great Southern of India and Carnatic Railway Companies) - 1875	54,228	44,393	4,732	103,353
Great Southern and Carnatic for 1st half of - 1874	23,586	18,001	1,184	42,771
South Indian for 2nd half of - 1874	27,192	19,939	1,222	48,413
Eastern Bengal - 1875	110,298	146,472	39,048	295,818
" " - 1874	99,033	211,519	55,379	365,931
Oude and Rohilkhund - 1875	137,585	130,602	6,985	275,122
" " - 1874	109,288	87,933	3,186	200,402
Totals for Guaranteed Railways - 1875	2,340,994	4,530,266	242,638	7,113,898
" - 1874	2,143,034	5,245,569	324,454	7,703,357
STATE.				
Calcutta and South-eastern - 1875	6,354	2,854	1,157	10,365
" " - 1874	5,309	2,481	1,530	9,120
Nalhati - 1875	5,324	2,566	52	7,942
" " - 1874	4,830	2,836	137	7,803
Rajputana - 1875	61,750	108,378	4,620	174,728
" " - 1874	22,847	33,746	5,104	61,697
Wardha Valley - 1875	895	2,240	39	2,674
" " - 1874	316	1,576	35	1,927
Holkar's - 1875	7,829	23,513	603	31,945
" (11 months) - 1874	4,368	5,261	690	10,319
Nizam's - 1875	25,136	20,204	174	45,514
" " - 1874	6,977	3,480	51	10,508
Punjab, Northern - 1875	9,704	4,364	208	14,276
Tirhut - 1875	686	783	9	1,478
BERAR.				
Amraoti - 1875	740	4,670	16	5,426
" " - 1874	702	2,063	21	2,786
Khamgaon - 1875	151	3,671	11	3,833
" " - 1874	156	2,299	12	2,467
Totals for State Railways - 1875	118,049	173,243	6,889	298,181
" - 1874	45,505	53,742	7,380	106,627
Grand Total for all Railways - 1875	2,459,043	4,703,509	249,527	7,412,079
" - 1874	2,188,539	5,289,611	331,834	7,809,984

1874 and 1875, as given in the Accounts passed by Government.

Expenditure.			Per-centage of Expenditure to Gross Receipts.	Net Receipts.
Maintenance.	Working, &c.	Total.		
£	£	£		£
226,435	736,619	963,054	38	1,546,609
203,420	922,303	1,125,723	35	2,061,922
33,654	68,672	107,326	58	77,722
16,889	83,192	100,081	43	134,956
153,742	774,044	932,786	47	1,040,298
193,996	899,823	1,093,819	59	754,728
152,016	262,188	414,204	70	175,188
112,126	237,998	350,124	64	191,305
81,378	237,165	318,543	54	266,911
49,340	230,538	279,878	52	257,142
79,060	248,996	328,056	64	183,979
77,509	271,162	348,671	56	270,517
13,399	55,988	69,387	81	15,642
18,467	53,660	72,127	93	4,847
7,698	42,076	49,774	48	53,579
5,568	21,304	26,872	62	15,899
5,849	22,648	28,497	58	19,916
54,657	135,424	190,081	64	105,737
39,303	158,907	198,210	54	167,721
33,015	131,258	164,273	59	110,849
30,407	98,675	129,082	64	71,320
845,054	2,692,430	3,537,484	49	3,576,514
752,874	3,000,210	3,753,084	48	3,950,273
2,014	6,329	8,343	80	2,022
1,645	5,500	7,145	78	1,975
1,811	4,327	6,138	77	1,804
1,135	4,110	5,245	67	2,558
33,180	78,066	111,246	63	63,482
15,028	34,670	49,698	80	11,999
697	2,170	2,867	107	Loss 193
512	1,510	2,022	105	Loss 95
8,234	27,352	35,586	95	1,359
1,704	6,984	8,688	84	1,631
16,132	35,709	51,841	113	Loss 6,327
2,197	7,688	9,885	94	623
1,992	6,066	8,058	56	6,218
506	581	1,087	73	391
320	3,808	4,128	76	1,298
361	3,392	3,753	134	Loss 967
280	2,253	2,533	66	1,300
278	1,724	2,002	81	465
60,166	166,661	226,827	76	71,354
22,860	65,578	88,438	82	18,189
905,220	2,859,091	3,764,311	50	3,647,868
775,734	3,065,788	3,841,522	49	3,968,462

TRAFFIC AND WORKING.

59. In considering the traffic returns for the past year and, more especially, while comparing the results with those of the previous year, certain exceptional circumstances should be borne in mind. The passenger traffic was, in the latter end of the year under review, augmented by the concourse of people which assembled at various places to greet His Royal Highness the Prince of Wales: the railways in Bengal and the North-West Provinces will suffer in comparison with the year 1874, in consequence of the unusual accession of traffic in that year through the transport of grain both from up and down country to the famine-stricken districts: and the depressed state of trade has had an injurious effect generally upon the traffic of all the lines. It must also be remarked, in reference to the net returns, that a large item of expenditure during the past year was for repairs, restorations, and increased protective works in consequence of the damage done by floods, and that doubts may be entertained as to whether the whole of the sum expended during the year on such operations was strictly a proper charge against revenue. At any rate, the effect has been to enlarge considerably the expenditure on revenue account.

60. The passenger traffic, it will be seen, increased 10·28 per cent. in numbers, and 12·30 per cent. in receipts, compared with the previous year. The proportion per cent. of first class was 78, of second class 2·30, and of the lower classes 96·92.

61. The actual increase in the number of passengers was 2,498,978. In 1873 they reached 23,557,605; in 1874, 24,280,459; and in 1875, 26,779,437. The open mileage over which the passengers were carried in 1873 averaged 5,711; in 1874, 5,597; and 6,298 in 1875. The increase last year was distributed over the different lines, the chief share falling to the Oudh and Rohilkund (388,000), the Bombay, Baroda, and Central India (347,000), the East Indian (279,000), and Great Indian Peninsula (210,000). About 580,000 were carried over the newly opened State lines in the Punjab and Rajpootana.

62. The receipts from passengers, including 235,680*l.* from excess luggage, parcels, horses, &c.; 81,270 from troop-trains, and 7,846*l.* for mail service; were 2,459,618*l.*, compared with 2,183,015*l.* of the previous year, and 2,194,607*l.* of 1873. The first class brought in 127,044*l.*, the second class, 114,507*l.*, and the lower classes, 1,832,882*l.* The first class increased 20,846*l.*, the second 11,517*l.*, and the third and fourth 182,772*l.* There was also an increase of 35,722*l.* in parcels, luggage, horses, &c. Some portion of this increase, as before hinted, must be laid down to the visit of His Royal Highness the Prince of Wales.

63. The goods traffic shows a falling off of 307,974 tons. This, as before mentioned, is in great measure due to the large quantities of grain, amounting to about 840,000 tons, which were taken to the districts where scarcity prevailed in 1874. The number of tons carried this year was 4,388,649, compared with 4,696,624 of the previous year. These figures include 579,974 and 687,450 tons of minerals respectively.

64. The receipts from goods amounted to 4,698,506*l.*, compared with 5,273,600*l.* of the previous year. The East Indian went back 337,639 tons in weight and 515,168*l.* in receipts, owing to the famine traffic of 1874. From the same cause the Sind, Punjab, and Delhi shows a falling off of 92,369*l.* The Great Indian Peninsula and the Bombay, Baroda, and Central India on the other hand show an improvement of 87,675*l.* and 55,075*l.* respectively.

65. The proportion per cent. of the gross revenue from goods was 65·67, and from passengers 34·33.

66. The number of miles travelled by trains during the year was, in consequence of the reduced traffic, necessarily less, being 17,950,312, compared with 18,475,322 of 1874; and the ton mileage, on the number of tons carried one mile, was 905,697,217, against 1,102,956,185.

67. The articles in which the greatest decrease took place were grain, seeds, rice and jute; while coal, sugar, salt, firewood, and wool showed an increase.

68. The most satisfactory feature on the side of improvement was salt. The opening of railway communication with the Patri and Sambhur Lakes, and the imposition of moderate rates have stimulated the traffic and brought a better and cheaper article to the consumer. A still further increase may be expected

if the supposed rival interests of different districts are not allowed to influence railway managers, and if low rates are uniformly levied. A very proper arrangement has recently been made on the Great Indian Peninsula Railway by which salt is registered and weighed at the stations instead of being sent to a central depôt, often distant from the line.

69. The expenses of maintaining and working the railways was 3,672,053*l.*, compared with 3,682,601*l.* The steam flotilla on the Indus in 1874, cost 73,646*l.*; in 1875, 67,870*l.* The outlay for maintenance is in several cases swelled by the heavy cost of repairs in consequence of the damage done by the floods during the second half of the year, and also by reserves from the revenue receipts for the same object. One great source of expense is the excessive amount of tare arising partly from the construction of the vehicles, and partly from the large number of "return empties." It is very desirable to meet this evil as far as possible, and to improve the carrying capacity of the waggon, by reducing its dead weight in proportion thereto. This has been done on the East Indian by increasing the strength of the axles, and a similar process is going on with the rolling stock of other lines. Economy may also be observed in other ways. The railways in Central and Western India will be aided in this direction by the supplies of native coal now about to be provided; but more may be done by internal management, whether it be by a proper system of effective maintenance, by the careful packing and loading of trains, by keeping down establishments at head quarters or at stations, or by general thrift and avoidance of waste. The prosperity of a railway commences with economical management; for the smaller the expenses the lower can be the rates, and the greater will be the traffic and general success.

70. This is clearly exemplified in the subjoined tables which Mr. Rendel has again prepared on the same basis as those furnished in former reports. It will be seen that the line which is most successful is that which charges less, which does its work for less than the others. The average sums received by the East Indian for carrying one passenger and one ton per mile were last year, on the main line, *·378d.* and *1·013d.* respectively. On the Great Indian Peninsula these sums were *·414d.* and *1·498d.*; on the Madras, *·374d.* and *1·194d.*; on the Bombay and Baroda, *·378d.* and *1·38d.*; on the Punjab and Delhi, *·355d.* and *1·22d.*; and on the Eastern Bengal, *·378d.* and *1·236d.* The average cost of carrying a passenger and a ton of goods one mile on the main line of the East Indian Railway, was *·17d.* and *·324d.* respectively. On the Great Indian Peninsula these figures were *·298d.* and *·662d.*; on the Madras, *·216d.* and *·904d.*; on the Bombay and Baroda, *·255d.* and *·606d.*; on the Punjab and Delhi, *·234d.* and *·611d.*; and on the Eastern Bengal, *·242d.* and *·702d.* The average net earnings from each passenger per mile carried were, on the East Indian, *·208d.*; on the Great Indian Peninsula, *·116d.*; on the Madras, *·158d.*; on the Bombay and Baroda, *·123d.*; on the Eastern Bengal, *·136d.*; and on the Punjab, *·121d.* The average net earnings from each ton per mile carried were, on the East Indian, *·689d.*; on the Great Indian Peninsula, *·836d.*; on the Madras, *·29d.*; on the Bombay and Baroda, *·732d.*; on the Eastern Bengal, *·534d.*; and on the Punjab, *·609d.* The unsatisfactory results on the Madras Railway are explained by the facts that the lowest average goods train load (49 tons compared with 117 on the East Indian Railway), and the highest cost of carrying a ton of goods one mile (*·904d.* compared with *·344d.*) are found on that line.

RETURNS PREPARED BY MR. RENDEL.

" The returns given below are drawn up on the same principles as those given in the Report for 1874, and need not be repeated; but the figures relating to vehicle mileage are omitted in the present instance, nor are any returns given for the Scinde section of the Scinde, Punjab, and Delhi Railway, that section being small, and being entirely detached from the main portion of the line, and not affecting, or being affected by, the general system of trunk lines."

(a) PASSENGER TRAFFIC.

	East Indian Railway.		Great Indian Peninsula.	Madras.	Bombay, Baroda, and Central India.	Punjab, and Delhi.	Eastern Bengal.
	Main.	Jubbulpore.					
Average length open, miles	No. 1,280 £	No. 223½ £	No. 1,266½ £	No. 861.5 £	No. 490½ £	No. 563.5 £	No. 158 £
(1.) Receipts from passenger traffic.	801,307	77,307	478,531	238,040	228,349	210,031	110,289
(2.) Passenger train miles run	No. 2,244,749 s. d.	No. 232,957 s. d.	No. 1,529,189 s. d.	No. 711,711 s. d.	No. 568,245 s. d.	No. 630,142 s. d.	No. 245,233 s. d.
(3.) Average passenger train mile receipts.	7 1½	6 7½	6 3½	6 4½	8 1½	6 8	9 0
(4.) Number of passengers carried one mile.	No. 808,760,000 d.	No. 46,430,000 d.	No. 277,408,698 d.	No. 160,405,775 d.	No. 144,984,000 d.	No. 143,610,250 d.	No. 70,081,120 d.
(5.) Average sum received for carrying a passenger one mile.	.378	.389	.414	.374	.378	.351	.378
(6.) Average number of passengers in a train at any one time.	No. 236	No. 199.5	No. 181.5	No. 211.25	No. 267	No. 228	No. 235
(7.) Average number of passenger trains per diem each way, supposing each train to traverse the whole line open.	No. 2.4	No. 1.424	No. 1.65	No. 1.13	No. 1.3	No. 1.63	No. 3.13
(8.) Average number of passengers passing over each mile of line daily (both ways).	No. 1,089	No. 508	No. 600	No. 478	No. 934	No. 710	No. 1,314
(9.) Total working expenses for both goods and passengers, deducting telegraph special and miscellaneous and demurrage receipts from them.	£ 874,798	£ 91,714	£ 987,511	£ 394,917	£ 304,294	£ 230,025	£ 154,401
(10.) Average cost of running a train mile, passenger and goods miles assumed to cost the same.	s. d. 3 2.14	s. d. 4 1.5	s. d. 4 6.1	s. d. 3 8½	s. d. 5 5½	s. d. 4 5½	s. d. 5 9
(11.) Average cost of carrying a passenger one mile.	d. .37	d. .249	d. .386	d. .216	d. .253	d. .234	d. .242

(b) GOODS TRAFFIC.

Average length open, miles	No. 1,280 £	No. 223½ £	No. 1,266½ £	No. 861.5 £	No. 490½ £	No. 563.5 £	No. 158 £
(1.) Receipts from goods traffic	1,620,098	92,186	1,458,994	344,057	342,556	173,163	143,830
(2.) Goods train miles run	No. 3,250,825 s. d.	No. 213,757 s. d.	No. 2,353,009 s. d.	No. 1,410,048 s. d.	No. 651,322 s. d.	No. 401,333 s. d.	No. 288,390 s. d.
(3.) Average goods train mile receipts.	9 11½	8 8	10 2.3	4 10.3	13 5½	5 10½	10 1½
(4.) Tons of goods carried one mile.	No. 383,683,600 d.	No. 19,347,400 d.	No. 233,024,150 d.	Tons. 69,157,136 d.	No. 59,637,130 d.	Tons. 35,133,630 d.	No. 28,328,160 d.
(5.) Average sum received for carrying one ton one mile.	1.013	1.142	1.493	1.194	1.58	1.22	1.236
(6.) Average number of tons in a goods train at one time.	No. 117.7	No. 90.9	No. 31.7	No. 49	No. 108	Tons. 87.5	No. 98.25
(7.) Average number of goods trains per diem each way, supposing each train to run over the whole line open.	No. 3.49	No. 1.3	No. 3.1	No. 2.25	No. 1.75	No. .993	No. 2.5
(8.) Average number of tons of goods passing over each mile of line daily (both ways).	No. 831	No. 237	No. 504	No. 220	No. 380	No. 174	No. 491
(9.) Total working expenses for both goods and passengers, deducting from them telegraph special and miscellaneous and demurrage receipts.	£ 874,798	£ 91,714	£ 987,511	£ 394,917	£ 304,294	£ 230,025	£ 154,401
(10.) Average cost per train mile, goods and passenger miles assumed to cost the same.	s. d. 3 2.14	s. d. 4 1.5	s. d. 4 6.1	s. d. 3 8½	s. d. 5 5½	s. d. 4 5½	s. d. 5 9
(11.) Average cost of carrying a ton of goods one mile.	d. .324	d. .543	d. .603	d. .904	d. .606	d. .611	d. .702

" From the foregoing the following may be gathered, namely, that the highest average passenger train load (285 persons), was obtained on the Eastern Bengal; the lowest (181.5 persons), occurred on the Great Indian Peninsula Railway. The highest average goods train load (117.7 tons), was obtained on the East Indian Railway; the lowest (49 tons), is found on the Madras line.

" The lowest cost per train mile (3s. 2.14d.) is found on the East Indian, Main Line; the highest (5s. 9d.) on the Eastern Bengal.

" The lowest cost of carrying a passenger one mile (.17d.) is found on the East Indian, Main Line; the highest (.298d.) on the Great Indian Peninsula Railway.

" The lowest cost of carrying a ton of goods one mile (.344d.) is found on the East Indian, Main Line; the highest (.904d.) on the Madras line.

" The lowest average charge for carrying a passenger one mile (.351d.) is found on the Punjab line; the highest (.414d.) on the Great Indian Peninsula.

" The lowest average charge for carrying a ton of goods one mile (1.013d.) is found on the East Indian, Main Line; the highest (1.498d.) on the Great Indian Peninsula.

" The largest passenger traffic (1,214 persons passing over each mile per diem on the average) is found on the Eastern Bengal; the lowest (478) on the Madras.

" The largest goods traffic (821 tons passing over each mile per diem on the average) is found on the East Indian, Main Line; the lowest (174 tons) on the Punjab line."

FARES and RATES in use on the INDIAN RAILWAYS.

Railway.	Passengers.					Goods.					
	Fare for travelling One Mile.					Rate for conveying One Ton One Mile.					
	First Class.	Second Class.	Intermediate Class.	Third Class.	Fourth or Coolie Class.	Of First or Lowest Class.	Of Second Class.	Of Third Class.	Of Fourth Class.	Of Fifth or Highest Class.	Special.
GUARANTEED.	pies.*	pies.	pies.	pies.	pies.	pies.	pies.	pies.	pies.	pies.	pies.
East Indian, Main Line.	18	9	4½	3	—	9.073	13.61	18.146	22.685	27.221	From 4.54 to 9.073.
East Indian, Jubulpore Line.	18	9	4½	3	—	9.073	18.61	18.146	22.685	27.221	From 5.44 to 9.073.
Great Indian Peninsula.	18	9	—	4	2½	10	14	24	34	48	From 5.5 to 8.
Madras	15	6½	—	8½	2	12	14	18	24	36	From 4 to 10.
Bombay, Baroda, and Central India.	15	7	Third Mail 4	Class. Ordinary 3	—	10	15	21	30	42	Up to 8.
Sind, Punjab, and Delhi.	18	9	4½	3	—	9.07	18.61	18.14	22.66	27.22	6.80.
South Indian	8	3	—	2	—	12	14†	18†	24	36 to 54	6 to 10.
Eastern Bengal	12	6	—	4½	3	9.88	14	18.66	28	56	9.45 to 10.28.
Oude and Rohilkund	Upper 9	Upper Reserved 36	Lower 2	L. Reserved. 18 & 24	Lower Reserved 3	9.08	18.62	18.16	22.70	27.25	5.40 to 8.80.
STATE.	Upper 9	Lower 3	Special 2	—	—	—	—	—	—	—	—
Calcutta and South-Eastern.	28.13	14.07	—	7.06	4.62	12.71	21.72	30.3	52.79	84.5	8.16.
Nalhati	18	9	—	4	2½	10	14	24	34	48	5.5 to 8.
Amraoti	18	9	—	4	2½	10	14	24	34	48	8 to 12. "
Khamgaon	10.38	4.61	—	2.03	—	18.14	17.83	25.85	—	—	5.5 to 8.
Rajputana	18	9	—	4	2½	10	14	24	34	48	8.29.
Wardha Valley	11.8	4.42	—	2.21	—	13.26	19.90	26.53	—	—	5.26 to 5.45.
Holkar's	9.29	4.64	—	1.74	—	10.53	15.80	21.06	—	—	5 to 6.
Punjab, Northern	13	4.8	—	2.1	—	9.9	14.8	19.8	—	—	5.5 to 8.
Tirhut	18	9	—	4	2½	10	14	24	34	48	—
Nizam's	18	9	—	4	2½	10	14	24	34	48	—

* 8 pies = 1d.

† Rates only in force during the early months of the year.

STATEMENT showing the COST and CONSUMPTION of FUEL at the Point of DELIVERY on the respective LINES during the Year 1875.

Railway.	Coal.					Coke.					Patent Fuel.					Wood.				
	Quantity in Tons.	Total Cost.	Cost per Ton.	Consumption.		Quantity in Tons.	Total Cost.	Cost per Ton.	Consumption.		Quantity in Tons.	Total Cost.	Cost per Ton.	Consumption.		Quantity in Tons.	Total Cost.	Cost per Ton.	Consumption.	
				Per Train Mile in lbs.	Per Vehicle per Mile.				Per Train Mile in lbs.	Per Vehicle per Mile.				Per Train Mile in lbs.	Per Vehicle per Mile.				Per Train Mile in lbs.	Per Vehicle per Mile.
East Indian, Main Line	118,531	£ 40,521 0 0	£ 0 6 10	48.23											11	£ 6 1 8	£ 0 11 0.64			
Line. Jabalpur	8,828	11,617 1 5	1 6 4	44.86																
Great Indian Peninsula	86,596	168,419 17 8	1 18 11	44.26	2.12	1,487	8,881 7 5	2 12 2	.76	.04										
Madras	12,718	35,819 0 0	2 16 4			409	1,240 0 0	3 0 7			553	1,223 0 0	2 4 3		2,172	1,068 7 6	0 9 10	1.11	.05	
Bombay, Baroda, and Central India.	20,290	43,759 0 0	2 3 1	89.24	1.59	263	595 0 0	2 5 3	.51	.2	3,981	8,955 0 0	2 4 11	7.69	.81	68,418	28,097 0 0	0 8 2	.90	.08
Sind, Punjab, and Delhi.	16,506	36,751 2 5	2 4 6	27.46	1.038						8	24 2 9	3 0 4	.01	.0005	466	242 0 0	10 10 4		
South Indian	4,584	8,757 4 2	1 18 8	28.5	1.57	4	15 1 1	3 15 8	.08	.001										
Eastern Bengal	12,274	9,652 7 7	0 15 8	51.52		50	27 8 0	0 10 9	.21											
Oudh and Rohilkund	1,484	2,304 0 0	1 11 0	3.30	.04															
Totals for guaranteed Railways.	281,761	357,600 13 3				2,218	5,758 11 6				4,542	10,202 2 9				183,442	58,827 5 6			
STATE.																				
Calcutta and South-Eastern.	1,183	1,076 13 0	0 19 2	66.71	3.54										7	3 14 0	0 16 7	0.39	.21	
Nalhati	516	514 0 0	0 19 11	37.91	3.51															
Rajputana	8,556	21,263 13 11	2 9 8	34.55	1.64	32	87 13 9	2 14 7	.12	.006					78	124 0 3	1 11 7	.32	.015	
Wardha Valley	196	872 0 0	1 18 0	78.6	4.38										5	2 10 0	0 10 0	2.00	.11	
Holkars	8	36 12 0	4 11 6												4,194	1,862 10 0	0 8 11	65.30	3.8	
Punjab, Northern															1,127	642 15 8	0 11 6	54	2.84	
Tirhut	88	62 0 0	0 14 0	1.4	2.5															
Nizam's	2,608	5,924 16 0	2 5 6	41.51	1.85										61	27 10 0	0 9 0	.97	.04	
BERAR.																				
Auraoti	149	350 0 0	2 7 0	63.6	4.29										11	5 0 0	0 9 1	4.70	.82	
Khamgaon	100	237 5 0	2 7 5	57.5	3.17										11	5 0 0	0 9 1	6.32	.35	
Total for all Railways - Indus Steam Flotilla	295,160	387,438 3 2				2,245	5,846 4 8				4,542	10,202 2 9				188,936	61,000 5 5			
																43,718	18,632 7 11	0 8 6		
Totals for Railways and Flotilla.	295,160	387,438 3 2				2,245	5,846 4 8				4,542	10,202 2 9			182,654	79,638 8 4				

STATEMENT showing the QUANTITIES of the principal Articles of MERCHANDISE, &c., carried on the INDIAN RAILWAYS in 1874 and 1875.

Articles.	East Indian, Main Line.		East Indian, Jabalpur Line.		Great Indian Peninsula.		Madras.		Bombay, Baroda, and Central India.		Sind, Punjab, and Delhi.		Eastern Bengal.		Oude and Rohilkund.		South Indian.	
	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.	1875.	1874.
Cloth	See piece goods.		—	—	4,786	{ See piece goods.	5,799	5,783	See piece goods.		555	494	—	—	—	—	2,812	2,152
Coal	515,904	505,519	9	2,506	{ 1,758	{ 917	494	324	1,576	2,742	730	507	4,443	8,648	1,986	1,402	—	—
Cocoa-nuts	See dried fruits.		—	—	10,362	9,625	2,991	2,401	4,529	3,768	See dried fruits.		—	—	—	—	—	—
Coffee	—	—	—	—	—	—	4,940	4,884	21	29	50	46	—	—	—	—	—	—
Cotton	32,867	21,847	1,676	1,491	101,280	110,700	80,802	20,796	50,189	46,248	9,407	5,605	505	471	6,274	4,401	—	—
Dried Fruits	5,430	5,081	2,911	2,787	18,867	12,444	—	—	5,374	3,807	6,974	6,232	—	—	—	—	—	—
Firewood	18,552	12,346	11,530	8,817	34,977	25,741	11,529	9,588	5,534	8,025	14,121	14,848	—	—	12,002	3,707	—	—
Grain	69,666	340,248	18,114	63,639	215,784	232,036	24,117	33,688	44,384	32,188	65,700	244,988	14,271	15,241	75,301	39,439	41,940	36,940
Green Fruits and Vegetables	—	—	—	—	14,029	12,336	5,187	5,537	8,968	12,988	3,145	2,209	—	—	1,668	1,450	2,496	3,513
Hides	19,170	22,913	1,462	885	{ 5,573	{ 2,693	9,113	6,152	701	688	2,734	2,734	6,184	5,335	2,118	2,179	1,213	807
Iron	39,875	60,720	3,769	4,348	—	—	8,992	6,817	See metal.		9,960	7,899	34	28	—	—	—	—
Jaggree and Sugar	65,496	50,686	22,203	20,146	25,686	20,958	14,169	13,427	27,909	22,223	36,906	29,778	7,389	8,058	40,712	17,548	—	—
Jute	620	1,016	231	265	—	—	—	—	—	—	{ Included in } hemp & flax.		94,694	112,407	319	570	—	—
Metal and Hardware	—	—	—	—	18,465	39,176	—	—	7,800	5,809	1,870	1,829	667	620	8,618	4,763	—	—
Military Stores	21,157	14,488	1,343	886	7,591	7,366	3,556	4,197	1,665	1,677	11,068	10,553	212	684	7,032	3,271	—	—
Oil	8,517	3,086	86	66	10,115	9,259	6,758	5,970	1,422	1,842	{ Included in ghee } and oil.		—	—	648	630	2,123	1,385
Opium	6,531	7,648	—	—	3,426	4,311	—	—	1,264	902	{ Included in drugs } and medicine.		16	21	523	332	—	—
Piece Goods	47,149	44,872	5,030	4,755	12,595	16,278	—	—	7,589	7,280	9,903	9,827	10,263	10,289	8,691	4,930	—	—
Rice	110,057	449,978	2,051	1,792	See grain.		75,118	63,742	See grain.		{ Included in } edible grain.		22,840	101,452	—	—	—	—
Salt	143,919	123,182	6,609	5,214	70,572	65,802	47,996	43,051	38,246	32,117	11,055	11,344	3,776	3,117	36,603	24,734	11,570	11,401
Seeds	159,714	129,586	11,296	9,570	112,785	63,801	16,921	15,029	28,528	8,968	60,184	28,453	22,081	35,623	10,805	7,153	7,508	6,251
Silk	718	664	118	71	697	452	—	—	See piece goods.		122	138	117	222	—	—	—	—
Timber	13,917	19,154	6,401	1,088	22,406	15,569	17,327	14,797	8,981	7,691	3,719	6,217	—	—	18,838	17,022	—	—
Tobacco	8,930	9,508	1,064	1,354	3,677	3,313	6,127	6,352	8,100	7,537	947	935	9,017	14,532	557	352	892	944
Twist	2,729	1,869	383	264	5,708	4,928	4,389	4,095	2,183	1,573	1,230	743	—	—	625	693	—	—
Wines, Spirits, &c.	8,979	7,135	398	439	4,001	4,254	2,980	1,923	619	630	2,717	2,645	381	189	2,455	2,704	—	—
Wool	—	—	—	—	211	162	—	—	2,185	1,950	5,798	3,963	—	—	—	—	—	—

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37

STATEMENTS relating to the PASSENGER and GOODS TRAFFIC and the GROSS

TABLE No. 1.—STATEMENT of TRAFFIC ON THE INDIAN

Railway.	Actual Number of Miles open on 31st December, and Average Number of Miles of Open Line during 1875.						Number of Miles of Sidings on 31st December 1875.	Passenger Traffic.						Number of Holders of Season and Periodical Tickets.
	Double.		Single.		Total.			Number of Passengers (exclusive of Holders of Season and Periodical Tickets).						
	Actual.	Average.	Actual.	Average.	Actual.	Average.		By First Class.	By Second Class.	By Intermediate Class.	By Third Class.	By Fourth or Coolie Class.	Total by all the Classes.	
GUARANTEED.														
East Indian, Main Line	410½	410½	869½	869½	1,379½	1,379½	281	44,911	110,620½	420,671½	5,498,935½	—	6,060,028½	8,676½
East Indian, Jabalpur Line	—	—	223½	223½	223½	223½	21½	4,484½	16,512	5,956½	237,142½	—	264,095½	—
Great Indian Peninsula	327½	327½	989	939	1,266½	1,266½	309½	27,437	169,331	—	908,928	2,269,553	3,340,238	890
Madras	8½	8½	853	853	861½	861½	90½	13,244	61,974	—	1,832,393½	837,968	2,735,577½	98
Bombay, Baroda, and Central India	23½	23½	407	407	430½	430½	73	20,909	174,348	—	Third Class Mail 854,217 Ordry. 3,534,860	—	4,084,339	5,270
Sind, Punjab, and Delhi	4½	4½	659	659	663½	663½	108½	17,502	42,442	20,236½	2,173,067	—	2,253,247½	—
South Indian	—	—	283	217	283	217	22	8,570½	24,061½	—	1,529,100	—	1,556,738	4
Eastern Bengal	—	—	187½	152½	187½	152½	39½	32,185½	53,538	—	807,625	1,256,832½	1,710,236	2,533
Oudh and Rohilkhand	—	—	544½	544	544½	544	46½	Upper 18,398	—	—	Lower 2,963,839½	—	2,382,237½	—
STATE.														
Calcutta and South-eastern	—	—	23	22	23	22	6½	Upper 2,157	—	—	Lower 496,100½	—	469,263½	—
Nalhati	—	—	27½	27½	27½	27½	1½	577	2,253½	—	22,406	55,829½	61,065	—
Amraoti	—	—	6	6	6	6	½	609	1,093	—	53,024	64	55,690	—
Khamsaon	—	—	8	8	8	8	½	176	388½	—	4,178	5,721	8,463½	—
Nisam's	—	—	121	121	121	121	7	2,616	8,638	—	33,998	210,979½	265,226½	13
Wardha Valley	—	—	19	19	19	19	—	300	291½	—	1,440½	11,457	13,399	—
Tirhut	—	—	44	—	44	—	4½	197	468	—	12,740	—	14,408	—
Punjab, Northern	—	—	62	44½	62	44½	4	1,500	4,225	—	250,390	—	265,175	—
Rajputana	—	—	378½	344½	378½	344½	39½	2,789	10,401	—	985,635	—	998,858	10
Holkar's	—	—	57	55½	57	55½	8	966	6,002	—	176,340	—	182,338	—
Totals for Railways	709	709	5,692½	5,529½	6,461½	6,293½	946½	195,442½	617,580½	452,764½	17,233,523	3,230,261½	20,769,578	17,469½
Indus Steam Flotilla	—	—	—	—	575	575	—	244	219	—	2,399½	—	2,659½	—
Totals for Railways and Flotilla					7,036½			195,686½	617,799½		17,292,018½		20,770,457½	

RECEIPTS and EXPENSES for the Year ended 31st December 1875.

RAILWAYS during the Year ended 31st December 1875.

Goods Traffic.										
Number of Live Stock.	Number of Tons of Minerals.			Number of Tons of General Merchandise.						
	Number of Tons of Coal and Coke.	Number of Tons of all other Minerals.	Total Number of Tons of Minerals.	Of First or Lowest Class.	Of Second Class.	Of Third Class.	Of Fourth Class.	Of Fifth or Highest Class.	Special and Sundry.	Total of all Classes.
5,388	515,904	—	515,904	750,412	133,461	47,747	23,387	3,613	75,409	1,084,049
71	9	—	9	102,520	13,590	6,629	1,640	217	4,066	123,662
274,300	577	—	577	440,408	169,660	30,875	33,400	4,690	256,832	944,855
16,372	—	—	—	150,815	50,778	24,765	8,448	4,720	160,011	414,527
200,551	1,576 27,169*	18,376*	47,121	93,484	49,537	47,211	1,134	1,825	201,303	394,495
455	1,055	—	1,055	151,340	54,316	25,037	15,974	2,553	132,949	382,094
4,707	—	—	—	74,689	64	16	1,373	77	45,020	121,245
2,047	4,442	3,902	8,344	31,657	37,454	3,295	1,076	202	162,779	237,073
32	1,986	—	1,986	84,194	18,315	11,898	4,322	527	184,220	297,473
111	42	—	42	—	—	—	—	—	32,095	32,095
—	4,797	—	4,797	3,417	1,082	1,113	431	23	1,339	6,905
—	—	—	—	9,346	16,365	1,034	146	70	—	26,961
—	—	—	—	4,633	19,460	150	42	4	—	24,279
512	—	—	—	28,926	5,300	2,767	287	175	—	37,464
—	—	—	—	6,832	7,479	141	25	3	—	14,528
—	—	—	—	3,103	360	64	—	—	24	3,560
—	—	—	—	7,116‡	1,259‡	222‡	—	—	3,014‡	16,613‡
11	139	—	139	133,079	4,411	1,392	—	—	23,318	162,170
—	—	—	—	46,860	3,755	2,211	—	—	14,586	69,112
505,621	557,696	22,378	579,974	2,136,781‡	580,694‡	207,227‡	92,233	18,706	1,211,401‡	4,347,184‡
—	—	—	—	—	—	—	—	—	—	41,463
—	—	—	—	—	—	—	—	—	—	4,388,647‡

* On Company's account.

STATEMENT of TRAFFIC on the INDIAN RAILWAYS

Railway.	Number of Engines and Vehicles used in conveying Traffic.											Number of Miles in shunting			
	Engines.	Carriages.						Trucks.	Average Number of Vehicles in each Train.				By Passenger (including Special and Troop) Trains.	By Goods (including Construction Materials for other Railways) Trains.	By Mineral Trains.
		First Class.	Second Class.	Intermediate Class.	Third Class.	Fourth Class.	Total Number.		Carriages in each Passenger Train.	Trucks in each Goods Train.	In each Mixed Passenger and Goods Train.				
											Carriages.	Trucks.			
GUARANTEED.															
East Indian, Main Line, 1st half	414	73	86	81	324	—	564	5,380	174	234	164	84	1,207,048	2,633,789	210,859
2nd „	393	73	86	103	324	—	586	5,385	164	234	154	74			
„ Jabalpur Line -	36	1st half 8	14	4	30	—	50	881	144	254	74	19	178,238	109,870	110
2nd „ 8	36	14	4	30	—	56	881	144	234	74	19				
Great Indian Peninsula -	331	79	146	composite 87	369	67	748	6,760	144	264	104	15	1,901,185	2,480,504	—
Madras -	96	26	68	composite 33	300	38	355	3,572	9	19	6	10	23,204	522,133	—
Bombay, Baroda, and Central India -	62	13	25	composite 10	144	—	108	2,516	94	43	94	14	453,190	395,428	—
Sind, Punjab, and Delhi -	59	38	51	20 Royal saloon carriages	205	—	314	2,665	134	24	114	194	470,010	457,969	—
South Indian -	60	33	13	3	139	—	248	964	—	—	23		—	—	—
Eastern Bengal -	43	31	16	—	37	56	140	702	14	40	4	31	192,485	145,304	—
Oudh and Rohilkhand -	60	Upper 19	—	composite 21	Lower 209	—	249	820	11	19	10	11	17,240	123,888	—
STATE.															
Calcutta and South-eastern -	6	Upper 9	—	—	Lower 52	—	61	251	—	—	8	10	—	—	—
Nalhati -	5	2	—	1	—	5	8	17	—	—	8	7	—	—	—
Amraoti -	2	—	—	composite 1	2	2	5	23	—	23	5	10	12	144	—
Khamgaon -	2	—	—	composite 1	2	2	5	38	—	22	3	14	—	648	—
Nizam's -	5	4	6	composite 1	10	10	31	70	11	22	12	14	10,630	41,132	—
Wardha Valley -	1	—	—	composite 1	2	2	5	23	12	14	4	14	—	2,204	—
Tirhut -	6	3	1	—	7	—	11	91	—	23	8	9	44	1,462	—
Punjab, Northern -	9	8	4	—	31	—	43	104	—	—	13	6	—	—	—
Rajpootana -	51	22	11	—	63	—	116	805	15	25	11	9	4,205	125,808	—
Holkar's -	17	6	5	—	30	break vans 3	44	255	12	19	5	11	43,492	87,183	—
Totals													3,909,020	7,161,259	210,974

during the Year ended 31st December 1875—continued.

travelled by Trains (except piloting, and assisting).		Number of Ton Miles (expressed in the Number of Tons moved One Mile).															
By Mixed Passenger and Goods Trains.	By Trains conveying Material for Revenue Purposes.	Total Number of Train Miles.	Number of Train Miles per open Mile.	Excess Luggage, Parcels, Carriages, Horses, Dogs, &c. conveyed in Passenger Trains.	Goods Traffic.										Proportion of Up and Down Traffic.		
					Minerals.	General Merchandise.					Special and Sundry.	Total of all Classes.	Total Mineral and General Merchandise.	Up.	Down.		
(P.)	(G.)					First or Lowest Class.	Second Class.	Third Class.	Fourth Class.	Fifth Class.							
1,037,706	895,177	100,260	5,613,340	4,386,67	Lug. and parcels. 2,572,258 cargs. &c. 1,583,035	88,215,046	181,300,106	55,001,398	10,906,980	8,240,014	1,234,622	22,393,421	206,274,550	388,480,598	48'43	50'57	
60,689	102,709	8,437	446,181	2,008'08	Lug. and parcels. 420,605 cargs. &c. 103,470	2,068	14,130,382	2,782,771	1,201,879	332,842	40,728	809,338	19,845,930	10,345,906	48'17	51'33	
228,004	363,565	—	4,332,198	3,461	—	84,583	119,928,325	52,201,704	9,871,288	7,546,453	1,488,120	41,173,623	281,790,561	251,884,140	66	34	
693,507	898,915	—	2,127,789	2,430	1,144,078	—	26,824,179	8,771,782	4,140,754	1,768,537	533,523	37,452,187	63,499,967	68,400,967	60'37	39'03	
105,655	155,802	43,058	1,153,236	2,602	Luggage only. 293,184	5,766,723	15,817,493	10,286,842	11,750,491	215,612	479,008	18,851,058	57,401,404	63,107,222	55'59	44'41	
226,413	100,602	82,287	1,344,332	2,029	Luggage, &c. 683,611 No. of horses, cargs., &c. 11,400 103,057	230,433	18,895,756	9,782,192	3,695,776	2,145,771	411,035	17,367,467	51,308,507	51,529,040	64	36	
345,054		11,541	356,595	1,643	—	—	4,785,840	1,223	810	127,746	8,008	3,840,197	8,787,189	8,787,189	34	66	
52,752	146,094	—	533,636	3,372	233,637	306,651	2,283,982	4,770,668	379,251	196,937	24,628	20,172,490	27,926,966	28,825,607	17'78	82'22	
400,024	400,024	47,237	1,005,413	1,846	337,784	68,568	5,349,050	1,380,795	1,329,884	524,870	28,581	20,336,068	28,928,148	28,991,711	—	—	
21,665	18,055	98	39,818	1,422	3,151	789	—	—	—	—	—	747,334	747,334	748,117	99'08	0'02	
12,361	18,129	435	30,925	1,135	7,783	130,051	58,294	29,275	29,989	11,681	632	50,114	176,886	310,530	78'82	21'18	
2,233	2,255	—	5,244	874	—	—	60,307	99,033	6,223	879	431	—	162,863	162,863	—	—	
823	2,433	—	3,896	487	—	—	37,369	156,837	1,212	340	28	—	195,724	195,724	—	—	
49,262	33,461	—	140,435	1,161	—	—	2,469,206	547,213	250,897	29,384	18,171	—	3,304,670	3,304,670	—	—	
882	2,500	—	5,586	294	—	—	131,513	143,060	2,711	433	58	—	277,784	277,748	—	—	
3,067	2,301	—	6,894	156	1,232	—	110,195	15,838	2,709	—	—	1,056	183,797	183,797	39'9	60'3	
33,146	14,830	—	46,983	787	Luggage, &c. 21,352 Carriages, horses, &c. 59,433 192,506	—	276,476	67,632	120,146	—	—	64,133	538,801	526,891	58'18	51'18	
215,426	177,508	31,990	554,737	1,622	—	20,433	11,846,939	445,523	167,654	—	—	418,408	12,973,524	12,898,977	46'06	53'04	
2,155	2,633	3,229	143,722	2,521	56,581	—	2,381,373	162,559	137,933	—	—	459,016	3,130,581	3,130,581	9'87	90'13	
3,143,751	2,344,654	336,589	17,950,313	—	7,225,401	94,906,092	408,776,811	143,776,431	49,683,895	21,140,377	4,399,310	184,148,251	810,790,251	905,697,217	—	—	
845,054		6,333,465															

TABLE No. 3.—GROSS RECEIPTS of the INDIAN RAILWAYS

Railway.	Passenger Traffic.													
	Receipts from Passengers.							Total Receipts from Excess Luggage Parcels, Carriages, H.P.s, Buses, &c. conveyed in Passenger Trains.	Receipts for Mail Service.	Receipts from Special Trains.	Receipts from Troop Trains.	Total Receipts from Passenger Traffic—(P.)	Passenger Receipts per Train Mile.	Receipts from Live Stock.
	First Class.	Second Class.	Intermediate Class.	Third Class.	Fourth or Coolie Class.	Holden of Season or Periodical Tickets.	Total Receipts from Passengers.							
GUARANTEED.	£	£	£	£	£	£	£	£	£	£	£	£	£	£
East Indian, Main Line	43,383	33,306	85,336	574,907	—	3,516	692,950	69,177	3,807	17,538	16,826	601,807	7'139	800
„ Jabalpur Line	5,702	4,400	3,469	46,068	—	—	57,639	7,444	935	5,306	5,278	77,297	6'686	28
Great Indian Peninsula	31,097	37,112	—	144,068	154,346	1,048	337,641	60,963	3,241	9,967	47,878	478,530	6'26	6,570
Madras	13,964	14,812	—	136,585	31,369	113	195,859	24,524	—	5,078	—	226,050	6'362	3,051
Bombay, Baroda, and Central India	6,065	11,735	Third class Mail 40,870	Ordinary 123,124	—	3,883	194,157	18,346	165	6,447	7,285	223,349	6'10	11,489
Sind, Punjab, and Delhi	12,875	18,363	3,816	165,683	—	—	195,613	28,513	1,022	1,313	—	221,450	6'28	110
South Indian	927	1,619	—	48,025	—	10	50,581	3,010	6	569	55	54,230	3'14	32
Eastern Bengal	4,014	3,134	—	23,559	67,954	1,397	95,068	10,635	70	516	—	110,279	7'59	27
Oudh and Rohilkhand	Upper 6,093	—	—	Lower 122,346	—	—	128,937	3,484	—	215	—	137,530	6'54	11
STATE.	Upper 187	—	—	Lower 5,956	—	—	6,143	311	—	—	—	6,354	5'97	11
Calcutta and South-eastern	179	243	—	1,104	3,043	—	4,569	665	90	10	—	5,834	6'61	—
Nalhati	29	52	—	610	—	—	691	49	—	—	—	740	6'59	—
Amraoti	11	12	—	97	33	—	125	23	—	—	—	151	3'67	—
Nizam's	1,303	1,316	—	3,314	18,515	6	19,856	2,673	—	312	2,098	23,136	6'39	18
Wardha Valley	33	21	—	57	356	—	396	39	—	—	—	396	6'06	—
Tirhut	60	37	—	565	—	—	632	15	—	10	—	647	4'41	—
Punjab, Northern	394	409	—	8,089	—	—	8,892	426	—	346	—	9,704	6'04	—
Rajputana	1,145	1,727	—	54,266	—	24	57,162	4,143	—	425	—	61,730	5'63	17
Holkar's	225	493	—	6,461	—	—	7,109	608	—	94	18	7,829	3'43	—
Totals for Railways	125,573	114,173	94,481	1,463,768	270,551	9,499	2,078,045	235,085	7,846	50,890	81,270	2,453,136	—	21,345
Indus Steam Flotilla	1,471	334	—	4,083	—	—	5,887	595	—	—	—	6,482	—	—
Totals for Railways and Flotilla	127,044	114,507	94,481	1,467,850	270,551	9,499	2,083,932	235,680	7,846	50,890	81,270	2,459,618	—	21,345

during Year ended 31st December 1875.

Goods Traffic.																	
Receipts from Minerals.			Receipts from General Merchandise (exclusive of Live Stock and Minerals).							Total Receipts from Goods Traffic—(G.)		Total Receipts from Passenger and Goods Traffic—(P.)+(G.)		Total Miscellaneous Receipts—(M.)		Total Receipts from Passengers, Goods, and Miscellaneous—(P.)+(G.)+(M.)	
From Coal and Coke	From other Minerals.	Total Receipts from Minerals.	From First or Lowest Class.	From Second Class.	From Third Class.	From Fourth Class.	From Fifth or Highest Class.	From Special and Sun-dry.	Total.	Total Receipts from Goods Traffic—(G.)	Goods Receipts per Train Mile.	Total Receipts from Passenger and Goods Traffic—(P.)+(G.)	Passenger and Goods Receipts per Train Mile.	Total Miscellaneous Receipts—(M.)	Miscellaneous Receipts per Train Mile.	Total Receipts from Passengers, Goods, and Miscellaneous—(P.)+(G.)+(M.)	Total Receipts per Train Mile.
£34,110	—	£34,110	£19,549	£31,138	£46,743	£0,639	£7,183	£72,499	£237,751	£1,022,079	9'936	£2,463,986	8'807	£5,071	£11	£2,508,037	9'118
5	—	5	54,747	17,705	11,312	3,600	616	4,388	92,168	92,168	8'607	169,403	7'606	16,550	698	185,042	8'304
478	—	478	559,331	468,723	118,564	106,325	38,456	164,220	1,450,600	1,467,660	10'22	1,936,106	8'34	36,890	17	1,973,050	9'01
—	—	—	126,580	55,402	33,316	18,028	8,833	98,028	340,206	343,647	4'853	569,697	5'354	19,797	136	589,494	5'540
807	805	1,112	51,439	63,626	94,439	8,234	10,079	77,437	330,254	342,865	12'44	671,204	10'24	14,351	26	685,455	10'50
735	—	735	83,143	60,463	33,478	26,529	5,302	60,115	268,970	269,324	9'66	461,283	7'77	20,654	33	511,937	8'10
—	—	—	27,343	11	3	1,515	73	12,109	41,643	41,735	8'42	95,965	5'66	6,704	4	102,669	5'96
1,365	197	1,562	10,623	51,687	3,380	2,619	659	95,133	144,301	145,800	12'76	356,169	9'87	12,811	46	368,980	10'08
211	—	211	27,517	10,131	18,035	6,559	880	71,830	180,092	180,224	4'84	287,310	5'59	6,936	14	274,746	5'75
4	—	4	—	—	—	—	—	2,339	2,339	2,354	3'16	6,208	4'64	1,157	58	10,365	5'22
733	—	733	384	332	478	303	27	264	1,788	2,596	2'83	7,890	5'18	62	03	7,942	5'21
—	—	—	1,286	8,075	243	40	20	—	4,670	4,670	31'14	5,416	20'63	10	06	5,426	20'6
—	—	—	539	8,075	40	16	1	—	3,671	3,671	23'89	3,332	19'62	11	06	3,333	19'68
—	—	—	18,003	4,338	2,094	465	386	—	20,186	20,204	5'02	45,340	6'46	174	02	45,514	6'48
—	—	—	1,018	1,152	66	12	2	—	2,340	2,340	9'52	2,635	9'43	39	14	2,674	9'57
—	—	—	634	117	88	—	—	4	788	788	4'22	1,469	4'23	9	03	1,478	4'31
—	—	—	2,234	592	1,251	—	—	237	4,364	4,364	5'89	14,068	5'99	208	09	14,276	6'06
273	—	278	79,519	5,236	3,347	—	—	20,081	108,083	108,378	7'160	170,108	6'503	4,620	177	174,728	6'656
—	—	—	17,236	1,660	2,016	—	—	2,871	23,513	23,513	5'24	31,343	4'65	603	06	31,945	4'73
238,785	503	239,287	1,705,453	1,078,598	468,668	250,484	82,028	783,595	4,358,826	4,619,958	—	7,073,094	—	226,153	—	7,299,247	—
—	—	—	—	—	—	—	—	—	—	78,548	—	—	—	—	—	85,187	—
238,785	502	239,287	1,705,453	1,078,598	468,668	250,484	82,028	783,595	4,358,826	4,608,506	—	7,073,094	—	226,153	—	7,364,277	—

during Year ended 31st December 1875.

Rates and Taxes.			Compensation for Personal Injury, &c., Damage and Loss of Goods.				Legal and Parliamentary Expenses.			Miscellaneous Working Expenditure, not included in the foregoing.			Total Working Expenditure.		
Gross.	Per Train Mile.	Per cent. of Gross Receipts.	Gross.		Per Train Mile.	Per cent. of Gross Receipts.	Gross.	Per Train Mile.	Per cent. of Gross Receipts.	Gross.	Per Train Mile.	Per cent. of Gross Receipts.	Gross.	Per Train Mile.	Per cent. of Gross Receipts.
			Personal.	Goods.											
£ 4,815	d. '21	'19	—	1,440	'06	'06	737	'03	'03	148,870	6'40	5'98	903,085	3'43	38'37
—	—	—	—	110	'06	'06	1	—	—	14,481	7'80	7'83	107,380	5'82	58'00
3,036	'17	'15	740	Or. 653	—	—	733	'04	'04	89,289	4'80	4'58	932,787	4'26	47'23
977	'09	'16	—	589	'06	'09	617	'07	'11	39,884	4'60	6'77	414,205	3'89	70'28
685	'14	'12	35	103	'03	'02	2,398	'40	'41	47,029	9'87	8'13	318,544	5'60	54'41
198	'03	'04	1,120	4,348	'27	1'06	560	'10	'11	40,178	8'77	9'6	328,007	4'87	64'08
536	'2	'8	—	18	—	—	2	—	—	6,831	4'0	6'7	49,776	2'8	48'5
675	'5	'25	—	551	'24	'19	190	'09	'07	23,708	11'55	9'56	167,191	6'27	62'15
—	—	—	5	782	'12	'28	—	—	—	29,098	6'84	10'58	164,275	3'26	59'70
75	'46	'73	—	—	—	—	—	—	—	1,156	7'17	11'44	3,343	4'19	80'49
4	'58	'05	24	3	'21	'34	—	—	—	875	6'79	11'02	6,138	3'9	77'26
—	—	—	—	—	—	—	—	—	—	—	—	—	4,128	15'74	76'09
—	—	—	—	—	—	—	—	—	—	—	—	—	2,636	18'02	66'08
—	—	—	—	—	—	—	—	—	—	428	'73	'94	51,841	7'38	113'90
—	—	—	—	—	—	—	—	—	—	159	6'83	5'95	2,867	10'26	107'22
—	—	—	—	—	—	—	—	—	—	—	—	—	1,057	3'16	73'6
—	—	—	—	3	'03	'02	—	—	—	1,316	6'72	9'22	8,058	3'45	56'45
—	—	—	5	153	'06	'09	—	—	—	18,230	7'88	10'43	111,246	4'01	63'67
—	—	—	3	4,248	7'10	13'51	8	'01	'02	4,071	6'89	12'75	30,546	4'26	95'75
10,697	—	—	1,933	11,053	—	—	5,236	—	—	477,273	—	—	3,072,063	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	67,870	—	70'82
—	—	—	—	—	—	—	—	—	—	—	—	—	3,739,933	—	—

*Exclusive of 07,342l. 10s. 8d. charged to special funds.

SUMMARY.

71. The principal facts noted in the foregoing pages may be briefly summed up as follows: During the year 1875, 261 miles were added to the open system of Indian railways, bringing the whole extent now completed up to 6,497 miles, of which 768 are constructed with a double, and 5,729 with a single line: 5,676 are on the 5' 6" gauge, and 821 on the narrow gauge. The section of the South Indian Railway between Madura and Tuticorin was opened in December last by His Royal Highness the Prince of Wales. Fair progress has been made on the works of the Indus Valley and Punjab Northern Railways. The line towards Darjeeling has also been getting on fairly. Sanction has been given to the completion of railway communication between Bombay and the North-West Provinces, via Ajmere, to which place lines have lately been constructed, both from Agra and Delhi. In other parts of India works are going on. Authority has been given to take in hand railways which, in addition to the lines already executed, will bring the whole length of railway up to 9,415 miles.

72. His Royal Highness the Prince of Wales during his visit to India travelled over 4,829 miles of railway, and expressed his satisfaction with the arrangements which had been made for his comfort and convenience.

73. During the year, 288,186 tons of railway materials were despatched to India from this country, of which 124,192 consisted of fuel. Since the commencement of railway operations there, 5,181,724 tons of goods, of the value of 34,659,444*l.* have been shipped in 8,495 ships.

74. The proprietors of stock and debentures of the guaranteed lines number 62,608, of whom only 390 are natives residing in India. The proportion of stock held in India is 1·56 per cent. of the whole.

75. The total amount expended on the railways to the 31st March last was 105,790,929*l.*, of which 93,720,794*l.* consisted of guaranteed capital, and 12,070,135*l.* of funds raised direct by the Government. Last year 2,760,940*l.* was expended on State lines, and 1,279,000*l.* on guaranteed lines.

76. The revenue derived last year from the open lines was 3,647,868*l.* The gross receipts were 7,412,179*l.*, and the expenditure 3,764,311*l.* The passengers earned 2,459,043*l.*, goods 4,703,509*l.*, and miscellaneous receipts amounted to 249,527*l.* The sums advanced to the different companies for guaranteed interest amounted to 4,650,346*l.*, which was 1,073,832*l.* more than they yielded.

77. The number of passengers carried was 26,779,437, being 2,498,978 more than the previous year. The proportion per cent. of the first class was 0·78, of the second 2·30, and of the lower classes 96·92. The number of tons carried was 4,388,649. The proportion per cent. of the gross revenue from goods was 65·67, and from passengers 34·33. The number of miles travelled by trains was 17,950,312, compared with 18,475,322 of 1874.

78. One very serious accident happened during the year, which caused the death of nine passengers, and injury to 13 more. The engine of a mail train ran off the rails on the Jubbulpore branch of the East Indian Railway. It is supposed that the cow-catcher attached to the locomotive dropped off and got under the engine when going at full speed.

79. Other accidents occurred to passengers, but they were occasioned by the imprudence or misconduct of the sufferers. Of railway servants, eight were killed and 25 injured from causes beyond their control, and 93 were killed and 173 injured by preventible causes. The total number of accidents to trains was 868, compared with 767 of the previous year. They are principally caused by cattle trespassing.

80. The expenses of maintaining and working the railways amounted to 3,764,311*l.* compared with 3,841,522*l.* of the previous year. This outlay is, in several cases, augmented by the heavy cost of repairs in consequence of the damage done by floods. But one great source of ordinary expenditure is the large amount of tare, arising partly from the construction of the vehicles, and partly from the unequal stream of traffic up and down the lines.

81. The impressions left after a personal inspection of the railways are briefly these:—That they are conferring immense benefits on the country: that they are

upon the whole in good condition, and carefully managed: that they may do more than has hitherto been done for the development of traffic, and for the increase of profits: that a decrease in the rates of some of the present charges for conveyance, and an increase of facilities would assist to accomplish these objects: that measures of this description have been and are still being taken: that close attention is required to the expenses of working and maintenance in order to secure economy: that the extension of the present system, and the construction of light feeders is much to be desired, whenever the state of the finances of the country admits of the necessary expenditure.

I have the honour to be,
My Lord Marquis,
Your lordship's very obedient humble servant,
JULAND DANVERS.

APPENDIX.

THE INDIAN RAILWAYS, 1876.

GUARANTEED LINES.

1. East Indian. 1,503 $\frac{3}{4}$ miles.
Calcutta to Allahabad, 629 miles; thence north-west to Delhi, 389 miles, and south-west to Jabalpur, 228 miles; also the chord line between Bardwan and Lakhmisarai, with a mineral branch to Karharhali.
2. Great Indian Peninsula. 1,286 $\frac{3}{4}$ miles.
 1. The north-eastern line from Bombay to Bhusawal and Jabalpur, and from Bhusawal to Nagpur. 2. The south-eastern line from Bombay to Raichur, which is the junction with the Madras line.
3. Madras. 857 $\frac{3}{4}$ miles.
 1. South-western line to Beypur, with a branch to Bangalor, 492 miles; and another sanctioned to the foot of the Nilgiri mountains, 25 miles; also an extension from Bangalor to Mysore, 88 miles, surveying. 2. North-western line to Raichur, the junction with the Great Indian Peninsula, with a branch to Belari, 340 miles.
4. Bombay, Baroda, and Central India.
Bombay to Ahmedabad, and thence to Wadwan, 389 $\frac{1}{2}$ miles, with a branch from Anand to Dakor and Pali, 31 miles.
5. Sind, Punjab, and Delhi. 674 miles.
Delhi to Lahore and Mooltan in the Punjab, and Kotri to Karachi in Sind.
6. South Indian (late Great Southern of India and Carnatic, now amalgamated).
Nagapatam to Erod junction, 168 miles; and from Trichinopoli to Tuticorin, 215 $\frac{3}{4}$ miles, completed. Extensions in progress from Madras to Tanjor, 216 miles.
7. Eastern Bengal. 156 $\frac{1}{2}$ miles. Calcutta to Goalandu.
8. Oudh and Rohilkhand.
Benares to Moradabad, 414 miles; Cawnpore to Lucknow, 45 miles; Nawabganj to Bahram Ghat, 22 miles; Chanausi to Aligarh, 61 miles; being 542 miles open.

STATE LINES.

9. Calcutta and South-eastern. 28 miles.
Calcutta to Canning, on the Mutla River.
10. Nalhati. 27 $\frac{1}{2}$ miles. A branch from the East Indian Railway at Nalhat to Morshedabad.
11. Khamgaon. 7 $\frac{1}{2}$ miles. A branch from the Great Indian Peninsula Railway to Khamgaon.
12. Amraoti. 5 $\frac{1}{2}$ miles. A branch from the Great Indian Peninsula Railway to Amraoti.
13. Patri. 22 miles.
A branch from the Bombay, Baroda, and Central India Railway to the salt works on the Runn of Cutch.
14. Tirhut. 53 miles. Chumpta Ghat to Darbhanga.
15. Hyderabad. (*Nizam's Line*).
Wadi on the Great Indian Peninsula Railway to Hyderabad and Secunderabad, 121 miles.

STATE LINES NOT COMPLETED.

16. Punjab, Northern.
Lahore to Peshawar, 329 miles. Completed as far as Jhelum, 103 miles.

17. Rajputana.
 1. Agra to Jeypur and Ajmere, with a branch to Sambhar Lake, 251 miles.
 2. Delhi to Bandikui, and branch to Farruckhnagar, 142 miles; open from Ajmere to Nasirabad. 3. Indore to Neemuch and Ajmere, 450 miles.
18. Indus Valley.
 Mooltan to Kotri, 493 miles. In progress.
19. Indore and Khundwa. (*Holkar's Line.*) 86 miles.
 From Khundwa completed to the Nerbudda River.
20. Wardha Valley. 45 miles. Sanctioned from Wardha to Warora. Opened from Wardha, 18 miles.
21. Nagpur and Chattisgarh. 131 miles. In progress.
22. Carwar to Gadak. 252 miles. Surveyed, but in abeyance.
23. Rangoon and Irrawaddy Valley.
 Rangoon to Prome, 160 miles. Works commenced.
24. Northern Bengal. From the Ganges near Kooshtea on the Eastern Bengal Railway, to Jolpitori and Darjeeling Road. Surveyed. Works commenced.

I. INDIA.—GUARANTEED RAILWAYS.

LIST OF STATIONS.

Names.	Miles.	Names.	Miles.
EAST INDIAN RAILWAY.		EAST INDIAN RAILWAY—cont.	
MAIN LINE.		MAIN LINE—cont.	
	Distance from Howrah.		Distance from Howrah.
HOWRAH	0	Patna (City)	332
Bali	6	Bankipur (Patna Civil Station)	338
Connagar	9	DINAPUR	344
Serampur	12	Bihta	355
Baidyabati	15	Koilwar	360
Chandernagore	21	Arrah	368
Hugli	24	Bihia	382
Magra	29	Raghunathpur	391
Khanyan	35	Dumraon	401
Pandua	38	BAXAR	411
Bainchi	44	Guhmar	424
Memari	51	Dildarnagar	433
Saktigar	59	Zamania	442
BARDWAN	67	Sakaldiha	458
Kanu Junction for loop line	75	MOGHAL SARAI (JUNCTION)	469
Maneur	90	Benares (Branch)	475
Panigar	97	Ahraura Road	478
Rajband	101	Chunar	489
Durgapur	106	Puhari	499
Andal	116	MIRZAPUR	509
RANIGANJ	121	Gaipura	521
Sarsol	122	Nuhwai	530
Nimcha	124	Sirsa Road	541
Asensol	132	Karchana	553
Sitarampur (Junction)	138	Naini (Junction with the Jabalpur Line, though the fares are charged from Allahabad)	560
Barakar (Branch)	143	ALLAHABAD	564
Maijam	148	Manauri	575
Jamtara	157	Bharwari	588
Kharmatar	168	Sirathu	600
MADHUPUR (JUNCTION)	183	Khaga	616
Jagadispur	191	BAHRAMPUR	624
Mahesmanda	200	Fatehpur	637
Giridi (Karharbau)	206	Malwa	647
Baidyanath	201	Mohar	656
Simultala	217	Sirsol	671
Nawadi	228	CAWNPORE	684
Ghidhar	235	Bhaupur	698
Janoi	244	Rura	711
Mananpur	254	Jhijnhak	723
LAKHMISARAI (JUNCTION WITH LOOP LINE)	262	Paphund	735
Barbia	271	Achalda	746
Mokma	282	Bartna	758
Barh	299	ETAWAH	770
Rukhtiarpur	310	Jaswautnagar	780
Fathwa	324		

1. INDIA.—GUARANTEED RAILWAYS—*continued.*LIST OF STATIONS—*continued.*

Names.	Miles.	Names.	Miles.
ODDH AND ROHILKHAND RAILWAY—<i>continued.</i>		ODDH AND ROHILKHAND RAILWAY—<i>continued.</i>	
	Distance from Lucknow.		Distance from Lucknow.
HARDOI	63	Jelalganj	174
Chandpur	74	Phulpur	181
Auji	83	Babatpur	187
Kahelia	92	Shiupur	195
Rosa (Junction)	98	Benares (Cantonment)	199
SHAHJAHANPUR	102		
Tilhar	114	SIND, PUNJAB, AND DELHI RAILWAY.	
Miranpur Katra	120	PUNJAB AND DELHI SECTION.	
Fatehganj	124		Distance from Delhi.
Faridpur	134		
BARELI	146	DELHI	0
Lucknow	0	GHAZIABAD (JUNCTION WITH THE E.I. RAILWAY)	13
Harauni	14	Begamabad	28
Kusumbhi	21	Meerut City	40
Ajgain	24	MEERUT CANTONMENT	43
Unao	34	Khatauli	61
Cawnpore	46	MUZAFFARNAGAR	75
Bisaratganj	156	Deoband	90
Aonla	163	SAHARANPUR	111
Mahmudpur	171	Sarsawa	119
Dabara	174	Jagadhri	130
Asafpur	181	Barara	146
CHANDAUSI (JUNCTION WITH THE ALIGARH BRANCH)	190	UMBALLA CANTONMENT	161
Bilari	202	Umballa City	166
Kandarki	206	Rajpura	179
MORADABAD	217	Sarhind	194
Chandausi Junction	190	Khanna	205
Bijhot	200	Sanshwal	222
Banhari	209	LUDHIANA	232
Babrala	217	Phillur	240
Rajghat	220	Phagwara	254
Dubhai	224	JULLUNDUR CANTONMENT	264
Atrauli Road	233	Jullundur City	267
Harāvaganj	242	Kartarpur	276
Aligarh	250	East Bank (Beas)	287
Lucknow (towards Benares)	0	Beas	289
Malhaur	7	Jandela	303
Jagor	10	AMRITSAR	316
NAWABGANJ (JUNCTION WITH THE BAHRAMGHAT BRANCH)	17	Khana	324
Dumudapur	22	Atari	332
Bindaara	28	Jallo	338
Ramnagar	34	Meean Meer, East	345
Mahadeo	37	LAHORE	348
Bahramghat	39	Meean Meer, West	352
Rasauli	23	Khana	361
Safdarganj	29	Raewind	374
Dariabad	41	Changa Manga	392
Makdumpur	46	Wan Radharam	408
Radauli	55	Okara	428
Baragaon (Mastafabad)	61	MONTGOMERY	451
Sohawal	70	Harappa	464
FYZABAD	79	Chichawatni	477
Ajodhya	83	Channu	498
Darsinnagar	84	Kacha Khuh	512
Belar Ghât	91	Khanewal	525
Tandauli	98	Tatipur	543
Gosainganj	101	MOOLTAN	556
Camirpur	105	Sher Shah	567
Akbarpur	115		
Malipur	127	SIND SECTION.	
Bilwai	136	Kiamari	Distance from Kiamari.
Shahganj	143		
Kheta Farai	149	KARACHI (McLEOD STATION)	0
Marai	156	Karachi (Frere Station)	4
Jaunpur (City)	163		64
Jaunpur (Civil)	167		

1. INDIA.—GUARANTEED RAILWAYS—*continued.*

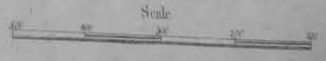
LIST OF STATIONS—*continued.*

Names.	Miles.	Names.	Miles.
SIND, PUNJAB, AND DELHI RAILWAY—cont.		GREAT INDIAN PENINSULA RAILWAY—cont.	
SIND SECTION— <i>cont.</i>		NORTH-EASTERN DIVISION— <i>cont.</i>	
Landi	18½	Timarni	424½
Dorbaji	38	Pagdhāl	433½
JUNGSHIE	57	Seoni	442½
Junpir	76	Dharam Kandi	447½
Maiting	89½	Dularia	455½
Bolari	101	Itārsi (Hoshangābād)	463½
KOTRI	109½	Rāmpur	469½
		Bagra	479½
		Semri	487½
GREAT INDIAN PENINSULA RAILWAY.		SOHAGPUR	
NORTH-EASTERN DIVISION.		Piparia	
BOMBAY	0	Bankheri	505½
Bicala	2½	Bābsi	517½
Chinchpokli	3½	Gādarwāra (Junction of the Mopani Branch)	527½
Parel Station	4½	Bohāni	536½
Dādār	5½	Kareli	544½
Sion	8	Narsinghpur	554½
Karla	9½	Karak Bel	564
Bhāndup	16½	Karāwāra	573½
Thāna	20½	Shahpura	583½
Diwa	26½	Mirganj	598
KALIAN JUNCTION (JUNCTION OF THE NORTH-EAST LINE WITH THE SOUTH-EAST LINE)		JABALPUR (JUNCTION WITH THE E.I. RAILWAY)	
Titwāla	33½		606½
Wāsind	40		616
Shāhapur	49½	NAGPUR BRANCH.	
Atgāon	53½	BHUSA WAL JUNCTION	276
Khardi	59	Warangāon	284
KASARA	66½	Nārgāon	295
IGATPURI	75	Khāmkhed	301½
Ghoti	85	Malkāpur	307½
Bailgāon	90½	Biswa Bridge	315½
Deolāli Barrack siding	100½	Nāndura	324½
NASIK ROAD	112½	Jalamb (Junction)	332
Kherwādi	116½	Khāmḡon	340
Niphād	123		339½
Lāsālgāon	136	SHEOGAON	350½
Manmār	146½	Pāras	352½
NANDGAON	161½	Akola	362½
Naydongri	177½	Borgāon	374½
CHALISGAON	190½	Martizāpur	386
Kajgāon	203½	Māunā	393½
Pāchora	215½	Karam	401½
Pāchora	231½	BADNERA (JUNCTION)	412
Mūheji	240½	Amrāoti	418
Mhasāwad	248		430
Shirsoli	254	Chāndur	440½
Jalgāon	261	Dhāmangāon	452½
Nasirābād	268½	Palgaon	462½
BHUSA WAL JUNCTION (JUNCTION WITH THE NAGPUR BRANCH)		Degāon	471
Sāuda	276	Wardha (Junction of the Wardha Valley State Railway)	479½
Nimbora	285½	Pāunar	490½
Rāwer	291½	Sindi	503
Burhanpore	297½	Bori	519½
Chāndni	310	NAGPUR	
Māndva	322	SOUTH-EASTERN DIVISION.	
Dongargāon	330	KALIAN (JUNCTION)	33
KHANDWA	338½	Badlāpur	42
Jawar	352½	Neral	53½
Bir	362½		
Harsād	374		
Kirkiān	385½		
Bhiringi	396½		
HARDA	404½		
	416½		

MAP OF
INDIA
 SHEWING THE LINES OF RAILWAY
 IN THE YEAR 1870.



Railways completed thus ———
 Do. in progress thus - - - -
 Do. projected thus
 Steam boats in connection
 with Railways thus —+—+—+—
 Coal Districts thus [shaded]
 Cotton Do. thus [stippled]



2. INDIA.—STATE RAILWAYS.

PROVISIONAL LIST OF STATIONS.

Corrected to 1st February 1876.

Names.	Distance from Termini.	Names.	Distance from Termini.
CALCUTTA AND SOUTH-EASTERN STATE RAILWAY.		INDUS VALLEY STATE RAILWAY—cont.	
	Miles.		Miles.
Calcutta	—	Bágarji	—
Baliganj	3	Ruk	—
Jadupur	5	Madeji Road	—
Garia	8	Naundero	—
Sonapur	10	Lárkána	—
Chapahati	15	Bákráni Road	320½
Basra	20	Bádeh	332
Canning	28	Radhan	343½
		Sita Road	335
PUNJAB NORTHERN STATE RAILWAY.		Phulji "	367½
		Dádú	377
Lahore	—	Bhán	389½
Shahdara	5	Sehwan	402
Muridki	17	Laki	414
Kámoke	29	Amri	422½
Gujránwála	41½	Sann	435½
Ghakkhar	51½	Májhand	—
Wazirabad	62	Gopang	—
Gujrat	71	Unarpur	472
Lála Musa	81	Petaro	484
Khárián	91	Kotri	498
Jhelum	103		
Dina	115	DELHI DISTRICT, RAJPUTANA STATE RAILWAY.	
Sohawa	128½	Delhi	—
Gujar Khan	140½	Pálam	11
Mandra	149	Keri (for Gurgaon)	19
Rowat	159	Garhi Harsaru	25
Rawul Pindée	171	<i>Sultanpur</i>	29½
		<i>Farrukhnagar</i>	32½
		Játaoli	37½
Mooltan	—	Khalilpur	44
Sher-Shah	6½	Rewari	51
Buch	12	Báwal	60
Shujabád	24½	Ajráka	68
Gilawála	39	Harsauli	76
Lodhrán	53½	Khirtal	80
Baháwalpur	63½	Barwára	88½
Samasata	70½	Ulwar	97
Mubárákpur	83½	Málakheri	109
Ahmadpur	93	Rájgarh	119
Chani di Goth	107	Baswa	127
Chaudri	119½	Bandikui Junction	134½
Firoza	132½		
Khanpur	146	AGRA DISTRICT, RAJPUTANA STATE RAILWAY.	
Katsamba	160	Agra (Fort)	—
Naushahra	173	Agra (Cantonment)	1½
Sádikabad	186	Bichpuri	6½
Walhar	—	Achnera	16½
Reti	210	Ikran	25½
Khairpur	219	Bhartpur	33½
Mirpur	228	Helak	40½
Sarhad	235	Nadbai	51
Ghotki	242	Kherli	61½
Mahesar	253	Mandawar	73½
Panoákil	259	Biwai	84
Sangi	268	Bandikui Junction	93½
Sukkur	276		

N.B.—Changing stations are shown in antique type, and branch stations in italics.

2. INDIA.—STATE RAILWAYS—continued.

PROVISIONAL LIST OF STATIONS—continued.

Names.	Distance from Termini.	Names.	Distance from Termini.
AGRA DISTRICT, RAJPUTANA RAILWAY—cont.		HOLKAR STATE RAILWAY.	
	Miles.		Miles.
Arnu	100½	Khundwa	—
Dosa	111½	Ajanti	7
Jarwara	118½	Atur	18
Basi	129½	Kheri	26
Kanota	135½	Sanawad	33
Sanganer	143	Mortakka*	36½
Jeypur	149½	Barwai	39½
Dhankia	161½	Bulwara	49½
Asalpur	172½	Choral Chanka	57
Phalera Junction	183½	Kala Khand	63½
<i>Sambhar</i>	188½	Mhow	72½
Naraina	190	Rao	79
Sali	201½	Indore	85½
Tilonia	208½		
Kishengarh	215		
Ladpura	223½	NEEMUCH STATE RAILWAY.	
Ajmere	232½	Indore	—
Nasirabad	246½	Biloda	12½
		Fatehabad Junction	23½
		<i>Ujein</i>	35½
		Chambal River	32½
SINDIA STATE RAILWAY.		Barnagar	43½
Agra	—	Runija	53
Kothaoli	9½	Bhilpank	62
Syeau	19	Ratlam	71
Mania	28	Nauli	80
Dholpur	36	Jaura	92½
Garuna	48	Dodar	102½
Nurabad	59	Dalaulda	114½
Gwalior	69	Mandesar	122½
		Piplia	135½
		Chaldu	142½
WEST RAJPUTANA STATE RAILWAY.		Neemuch	154½
Ajmere Junction	—	Nowagan	164½
Saradna	8½	Nimbhera	171½
Mangalyawas	14½	Satkanda	179½
Kharwa Road	21½	Chitor	190½
Byawar or Nyanagar	28½	Gangrar	200½
Sendra	39	Haminagarh	211½
Raypur	51½	Bhilwara	222½
Chandawal	59	Azimpura	232½
Sujat Road	69	Bara Raira	242½
Somrar	78	Rupalli	553
	85½	Sakrani	264½
Bhonta	95	Bhandarwan	276½
Daria	107	Nasirabad	288½
Vijwa	115½		
Bel	128½	KHAMGAON STATE RAILWAY.	
Erinpura Road	140½	Jalamb	—
Nanah	149½	Khamgaon	71
Pindwara	160		
Rohira Road	171½	AMRAOTI STATE RAILWAY.	
Bhimano	178½	Badnera	—
Abu	187	Amraoti	5½
Mawal	193½		
Sulotra Road	203½	NIZAM'S STATE RAILWAY.	
Chitrasani	212½	Wadi Junction	—
Palanpur	220	Chitapur	9
Chanpi	231	Sheydumb or Seram	23
Sidhpur	238½	Ullapur	38
Unja	247	Tandur	48
Maisana	260½	Dharur	57
Jaggudan	266½	Ilampalli	70
Dangarwa	276	Pattapur	87
Kalol	286	Lingampalli	100
Koria	292½	Hyderabad	115
Sabarmat	299½	<i>Secunderabad</i>	121
Ahmedabad	302		

* Closed as a station for the present.

N.B.—Changing stations are shown in a strike type, and branch stations in italics.

2. INDIA.—STATE RAILWAYS—*continued.*PROVISIONAL LIST OF STATIONS—*continued.*

Names.	Distance from Termini.	Names.	Distance from Termini.
PATRI STATE RAILWAY.		RANGOON AND IRRAWADDY VALLEY RAILWAY.	
	Miles.		Miles.
Viramgaum	—	Pungundong	—
Jhund Road	7½	Rangoon	2
Patri	17	Kemmendine	5
Kara Gora	22½	Thamine	9½
		Hlaugau	19½
		Egudun	29½
		Gyoby	44
		Ok-kan	56½
		Thongzai	66
		Lappadan	77
		Menghla	92
		Otpho	102
		Zigong	116
		Poungday	129½
		Pouktan	140½
		Sinmesway	149½
		Prome	161
NALHATI STATE RAILWAY.		* NORTHERN BENGAL STATE RAILWAY.	
Nalhati	—	Sara	—
Takipur	4	Gopalpur	—
Nowada	8	Malanchi	—
Bokhara	12½	Nator	24
Sagordighi	17	Mahdnagar	33½
Sahapur	21	Atrai	39½
Azimganj	27½	Raninagar	48
		Sitapur	—
		Chutiagram	55½
		Nawabganj	64½
		Jaipur Road	73½
		Panchbibi	79½
		Hili	85½
		Debpur	95
		Phulbari	—
		Parbatipur	112½
		<i>Rangpur</i>	13½
		<i>Dinapur</i>	132½
		Sidpur	121
		Darwani	129
		Chaura	139
		Bagdogra	146½
		Chilahati	156
		Haldibari	—
		Jalpigori	173
		Shikarpur	184
		Shampur	—
		Bidarganj	—
WARDHA VALLEY STATE RAILWAY.		MYSORE STATE RAILWAY.	
Wardha	—	Bangalor	—
Sonagaon	11	Bangalor Pété	2½
Hinganghat	19	Kengeri	7½
Nagri	31½	Kambligod	14
Warora (Passenger)	45	Bidadi	23½
Ditto (Coal)	46	Closepété	29½
		Chinnapatam	36½
		Madnra	48½
		Mandya	58
		Yellur	65½
		French Rocks	74½
		Seringapatam	79½
		Mysore	88
KARWAR STATE RAILWAY.			
Karwar	—		
Kulgad	17½		
Hebul	32		
Rawangati	43½		
Slimuni	55		
Iddagongi	62		
Yellapur	68		
Kirwhatti	80½		
Khulghatgi	94		
Misaracota	101		
Hubli	109½		
Sirgampi	120		
Anigheri	130		
Gadak	144½		
NAGPUR AND CHATTISGARH STATE RAILWAY.			
Nagpur Cantonment	—		
City	3½		
Kampti	8½		
Baldeo	19½		
Bhandara Road	42½		
Paruswara	49		
Firora	63½		
Dandaigaon	71½		
Kurwa	81½		
Komptha	90		
Karanja	101½		
Boreotola	121½		
Dongargarh	131½		

* Sites for the stations on the branches have not yet been suggested.
N.B.—Changing stations are shown in antique type, and branch stations in italics.

2. INDIA.—STATE RAILWAYS—*continued.*PROVISIONAL LIST OF STATIONS—*continued.*

Names.	Distance from Termini.	Names.	Distance from Termini.
TIRHUT STATE RAILWAY.		TIRHUT STATE RAILWAY—<i>cont.</i>	
	Miles.		Miles.
Semuria	—	<i>Not yet fixed</i> } Darbhanga	44
Tegra	8	<i>Haya</i> } Darbhanga Branch.	51
Begam Saria	14	<i>Darbhanga</i> }	58
Dalsing "	22	Wini (for Pusa and Tajpur) -	43
Ujiapar	29	Duli	52
Somastipur	36	Rehna	60
		Muzaffarpur	68

N.B.—Changing stations are shown in antique type, and branch stations in italics.

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LONDON:

Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODS,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.