

Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 1324-5R

DATED 1st November

[Despatch Abstract.]

Reports by Heads of Departments, Madras Railway.

Ordered that copies of the —, for half year ended 30th June 1893, be forwarded to the Govt of India.

Forwarded

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Form No. 4

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AGENT, AND MANAGER, M. R.

SIR,

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Subject.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

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Exhibit A.
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MADRAS RAILWAY.

REPORTS BY HEADS OF DEPARTMENTS FOR THE
HALF-YEAR ENDING 30TH JUNE 1893.

No. 2112.

MADRAS RAILWAY COMPANY,
MADRAS, 12th October, 1893.

To

JULIAN BYRNE, Esq.,

Secretary,

Madras Railway Company,

LONDON.

SIR,

I have the honour to submit, for the information of the Directors, the following summary of the operations of the Company for the half-year ended 30th June 1893. The detailed reports by the undermentioned Heads of Departments are forwarded herewith:—

The Chief Engineer.

„ Ag. Locomotive Superintendent.

„ Traffic Manager.

The Chief Auditor.

„ Ag. Telegraph Engineer.

„ Ag. Medical Officer.

2. The Financial results of the last four half-years are shewn in the annexed table:—

Half-year ended	Gross Earnings.	Total Expenditure.	Net Revenue.	Working Expenses per cent.	Receipts per mile per week.	Half-yearly dividend.
	Rs.	Rs.	Rs.			
1891 December	46,53,523	26,98,424	19,55,099	57.99	213.25	1.65
1892 June	47,45,102	26,73,052	20,72,050	56.33	217.45	1.72
„ December	48,79,568	26,59,485	22,20,083	54.50	223.63	1.85
1893 June	52,86,714	24,45,705	28,41,009	46.26	242.29	2.36

The increase in the gross earnings, as compared with those of the corresponding half-year of 1892, amounts to Rs. 5,41,612, and the reduction in working expenses to Rs. 2,27,347, the combined result of which is an increase in the net earnings of Rs. 7,68,959, equivalent to 37.11 per cent.

3. During the half-year 1,300,833 train miles were run as against 1,245,122 during the corresponding period. 5,073,350 passengers and 603,317 tons of goods were carried, being a considerable increase over the figures for June 1892 half-year, viz., 4,490,772 passengers and 558,497 tons of goods. In this half-year a change in the method of dealing with season tickets has been adopted under the orders of the Government. The average number of journeys is included instead of as in previous years the number of tickets only. For the purpose of fair comparison, the figure for the corresponding period has been altered and now includes the average journeys.

4. The result of the half-year's working is a dividend at the rate of 4.72 per cent. per annum, the highest dividend that has been earned since the commencement of operations. Loss by exchange again forms a heavy addition to working expenses, the total of the charges under this head included in the several departmental abstracts of expenditure amounting to Rs. 1,64,164.

5. The number of **passengers** (excluding troops and police), carried in each class and the gross receipts therefrom, during the first halves of the last three years, are shown in the following table:—

Half-year ended.	First Class.		Second Class.		Third Class.		Total.	
	No. Carried.	Money Earned.	No. Carried.	Money Earned.	No. Carried.	Money Earned.	No. Carried.	Money Earned.
		Rs.		Rs.		Rs.		Rs.
June 1891	7,151	75,013	19,723	74,668	4,206,099	14,00,154	4,232,973	15,49,835
Do. 1892	6,845	72,187	20,210	73,881	4,259,953	13,53,454	4,287,009	14,99,522
Do. 1893	8,775	80,462	28,527	88,333	4,998,677	15,37,298	5,035,979	17,06,093

In each of the three classes of passengers, there has been an increase in numbers and receipts, the increase in the third class being 738,724 and Rs. 1,83,844 respectively. Of this increase in numbers, 126,478 is on account of season tickets and is attributable chiefly to the change in the method of calculation already referred to. The figures for June 1891 and June 1892 half-years, given above, include the number of season tickets issued. The number of third class passengers carried and also the receipts, were higher than in any previous half-year. The increase in the passenger traffic was fairly general throughout the line.

6. The progress of the **goods traffic** during the same three half-years was:—

Half-year ended.	Goods traffic exclusive of Madras Railway material and Revenue stores.	Government stores and Foreign Railway material.	For the public.		Average receipt per ton lifted.
			Weight.	Receipts.	
	Rs.	Rs.	Tons.	Rs.	Rs.
June 1891	26,04,466	1,57,299	402,597	24,47,167	6.29
Do. 1892	26,87,605	57,877	377,391	26,29,728	7.06
Do. 1893	30,76,487	39,890	448,933	30,36,597	6.82

The total tonnage carried over the Railway during the past half-year was 603,317 tons as against 558,497 tons during the corresponding period, while the receipts were Rs. 31,58,365 and Rs. 28,13,648 respectively.

The principal increases are in coal, cotton, grain, oil seeds and provisions. Of these increases, that for coal is due to the larger requirements of the Gold Mining Companies at Kolar; the season for cotton was more favourable than in the corresponding period, while in regard to the grain traffic the noticeable feature is the despatch of considerable quantities from Mysore to Coimbatore and the districts served by the South Indian Railway. Although the total grain traffic shows a substantial increase, there is a falling off in the receipts from cholam and cumboo, the amount received being Rs. 1,10,204 less than in June 1892 half-year.

The principal commodities in which there have been decreases in receipts are tanning bark, manufactured leather and salt. The decrease in the quantity of salt carried is 2,967 tons and in the receipts Rs. 20,888.

7. The **maintenance charge per mile**, compared with the previous half-years, is as follows:—

Half-year.	Ordinary.	Extra.	Total.
1891 December	591	122	713
1892 June	595	72	667
„ December	631	141	772
1893 June	370	33	403

The Chief Engineer explains that the low rate of expenditure is due to the fact that a large number of second-hand rails in stock were utilized in renewals on the main line. 2,461 rails were renewed during the half-year as against 7,499 in the corresponding half-year.

The reduction in expenditure is also to some extent due to a much larger credit being given this half-year than in the corresponding period for stores returned to stock; the figures are Rs. 2,01,228 and Rs. 95,694 respectively.

8. The total cost of the **Locomotive Department** during the last four half-years has been as under:—

Half-year.	Total mileage.	Total cost including all charges.	Total cost per mile run.		
			Rs.	A.	P.
	No.	Rs.			
1891 December	1,526,458	11,88,849	0	12	5.53
1892 June	1,481,908	12,40,004	0	13	4.66
„ December	1,502,333	11,37,984	0	12	1.44
1893 June	1,527,934	12,64,279	0	13	2.86

The net increase over the corresponding half-year is Rs. 24,275, but this is more than accounted for by the abnormal charge for two new Locomotives. This charge is given by the Acting Locomotive Superintendent as Rs. 62,402-9-0 and is made up of the cost as shown at the foot of abstract B., Rs. 41,857-15-0 plus loss by exchange thereon, Rs. 20,544-10-0. Taking this abnormal charge into consideration as also the large addition to the mileage due to the increased traffic, the result of the working of the department must be regarded as satisfactory.

34 Locomotives and 2,567 Vehicles passed through the shops for repairs as compared with 35 and 2,665 respectively for the corresponding half-year.

3 Brake Vans, 10 Covered goods wagons and 4 Tool or Accident vans were renewed during the half-year.

9. The **Electric Telegraph** wires, block, needle and morse instruments, electric starting semaphores and intercommunication in trains were maintained satisfactorily during the half-year.

10. The Acting **Medical Officer** reports that the season has been fairly healthy; the number of cases of sickness dealt with being 7001 as against 7169 of the corresponding half of 1892. There were no cases of cholera, but there were 29 cases of small-pox treated during the period. The mortality among the employes was on the whole very low, the number of deaths being only four. The question of the extension of accommodation at Rayapuram for the Medical Department is having my attention.

11. **Railway Schools** are now maintained at seven only of the important stations on the line, those at Cuddapah and Katpadi having been closed during the half-year. The total number of children on the register was 420, and the average attendance 330.89. The cost to the Company of maintaining these schools during the period under review was Rs. 5,380.

12. The amount of the Company's contribution to the **Provident Institution** amounted for the half-year to Rs. 20,675-11-8, and this sum will be found entered in Abstract G. of the Capital and Revenue Account. The total amount at the credit of the Fund on the 30th June 1893, was Rs. 3,06,228-0-7.

13. The following movements in the **Company's Staff in India** are recorded:—

Mr. D. Ross-Johnson, who had been acting as Deputy Traffic Manager, was confirmed in that appointment.

„ A. Edwards, who had been acting as Assistant to the Agent and Manager, was confirmed in that appointment.

Mr. O'Sherman, who had been acting as General Storekeeper, was confirmed in that appointment.

„ J. Cramp, late Chief Auditor, retired from the Company's service on the 12th March 1893.

„ F. Dunsterville, First Assistant to the Chief Auditor, was appointed Chief Auditor in succession to Mr. Cramp.

„ T. Wake, who returned from sick leave on the 7th March 1893, was promoted from Second to First Assistant to the Chief Auditor in the place of Mr. Dunsterville.

„ A. Corben, Locomotive Accountant, was transferred to the Audit Department as Second Assistant to the Chief Auditor on the promotion of Mr. Wake.

„ J. Mitchell, Cashier, was promoted to Third Assistant to the Chief Auditor on the appointment of Mr. O'Sherman as General Storekeeper.

„ W. J. Parr, who had been acting as Third Assistant to the Chief Auditor, reverted to his appointment as Fourth Assistant to the Chief Auditor.

„ J. M. Ewing, Assistant Engineer, returned from furlough on the 30th May 1893.

„ H. J. Thompson, Assistant Engineer, proceeded to England on 18 months' furlough on the 15th June 1893.

„ J. R. Sandford was appointed temporary Assistant Engineer on the 30th June 1893.

„ G. K. Winter, Telegraph Engineer, proceeded to England on one year's furlough on the 20th March 1893.

„ R. E. Pigott, Assistant Telegraph Engineer, was appointed to act as Telegraph Engineer during the absence of Mr. Winter on furlough.

Dr. H. L. Ansted proceeded to England on 12 months' furlough on the 22nd March 1893. His death by drowning on the 3rd August 1893 was subsequently advised by the Board.

„ J. Carrie was appointed to act as Medical Officer during the absence on furlough of Dr. Ansted.

Loco. Foreman O. Horrocks proceeded to England on 6 months' sick leave on the 8th May 1893.

Loco. Foreman R. Shortland retired from the Company's service on the 6th June 1893.

14. In conclusion I wish to convey to the Board my appreciation of the assistance I have received from the Heads of Departments during the past half-year. Messrs. Carter, Read, Pilkington and Dunsterville have zealously and carefully watched the expenditure of their Departments with the result that the percentage of working expenses now stands at a lower figure than it has ever previously done.

I have the honour to be,

Sir,

Your most obedient servant,

A. EDWARDS,

For Agent and Manager.

MADRAS RAILWAY COMPANY,

CHIEF ENGINEER'S OFFICE,

MADRAS, 20th September 1893.

To

THE CHAIRMAN AND DIRECTORS,

Madras Railway Company,

GENTLEMEN,

LONDON.

I have the honor to submit my report for the half-year ending 30th June 1893.

Way and Works.—The cuttings and embankments throughout the line have been well maintained during the half-year to which this report refers. The catchwater drains and other protective works are in good order, and the monsoon rains have in no case injured the line.

In a few cases intercepting channels have been deepened or reconstructed where necessary, and every precaution taken to prevent heavy rainfall affecting the stability of the embankments.

Permanent Way.—The permanent way generally is in excellent order, with the exception of that part of the S. W. line between Kadalundi and Calicut, where the road is hard; on the third and fifth sections of 1st division, N. W. Line, where the rails although not bad enough to require renewal are worn and rough, and on the cotton-soil banks between Adoni and Raichur. This latter portion of the line during the south-west monsoon rains is always most difficult to keep up. The up-line between Arkonam and Tinnanore, now laid with 30 feet steel rails and improved fish plates, is in splendid running order and might safely be traversed at the highest speed.

Ballast.—During the half-year the covering of ballast with broken stone was confined to the double line between Madras and Arkonam, the whole of which will probably be completed by the end of this year.

Maintenance.—The cost of maintenance per mile compared with that of the previous half-year is as follows:—

Half-year ending 30th June 1893.

	RS.	A.	P.
Cost of maintenance including sidings	...	...	...
Extra expenditure	...	...	...
Ordinary Expenditure	594	10	8

Half-year ending 31st December 1892.

Cost of maintenance including sidings	...	...	...
Extra expenditure	...	...	...
Ordinary Expenditure	630	15	11

Half-year ending 30th June 1893.

Cost of maintenance including sidings	...	...	...
Extra expenditure	...	...	...
Ordinary Expenditure	369	9	5

This low rate of expenditure is due to the fact that a large number of second-hand rails in stock were utilized in renewals on the main line.

The number of miles inclusive of Calicut Extension maintained on the					
				S. W. Line	573½
Do.	do.	dc.	do.	N. W. Line	308½
Sidings, South West and North-West Lines	...	...	...	...	130
				Total	1,012

Total cost of Maintenance during the half-year ending 30th June 1893	RS.	A.	P.	RS.	A.	P.
...	6,09,209	2	11			
Less value of old rails and other items taken into stock.	2,01,227	15	1			
				4,07,981	3	10

The details of extraordinary expenditure for the half-year ending 30th June 1893 are as follows:—

				RS.	A.	P.
S. W. L.	Grouping points at Rayapuram	...	...	885	13	10
	Covering dusty portion of the Line with broken stones	...	...	21,935	12	7
	Strengthening Thootha Bridge, 4th Division, S. W. Line	...	...	9,870	5	4
	Repairing Breaches at 14½ and 168½ miles (Bangalore Branch).	...	...	951	5	1
	Junction arrangements at Mettupalaiyam	...	...	286	11	10
				Total	33,961	0 7

Cost of extra expenditure per mile	...	...	33,961	=	33	8	11
Cost of ordinary do. do. ...	...	...	1012	=	369	9	5

The number of rails renewed on South West and North West Lines for three half years is as follows:—

For the half-year ending 30th June 1892	...	...	...	7,499 rails.
Do. do. do. 31st December 1892	...	...	...	4,889 "
Do. do. do. 30th June 1893	...	...	...	2,461 "

Bridges.—The conversion of the small culvert into a girder bridge of 20 feet span at 166 miles 8 Telegraph posts, Bangalore Branch, where the line was breached on 13th August 1892, has been completed and the waterway is now ample for even exceptional floods.

Cheyair Bridge (N. W. Line).—The strengthening of the weak girders of this bridge has proved much more troublesome and expensive than at first anticipated. The old girders from the Papagani, Thootha and Matagapalli bridges, which are being used to duplicate those at the Cheyair, were found to be much strained and this involved taking them to pieces, straightening and re-riveting certain parts, but under the circumstances the work has progressed most satisfactorily.

Booga Bridge (N. W. Line).—The cross girders to be used in connection with the strengthening of this bridge are being prepared at the Cheyair in order to avoid the necessity for a separate establishment. When the Bridge Inspector and the necessary plant can be spared from the Cheyair, the work of doubling the main girder at the Booga will be proceeded with. Preparations such as temporary huts for stores and workmen have been erected and I expect that when once a fair start has been made a very short time will elapse before the work is completed.

Bridge at 395th mile, S. W. Line.—The strengthening of the weak girders at this bridge has been successfully carried out by halving the spans by the introduction of intermediate screw pile piers. The work was most creditably and rapidly executed by Mr. Strange, the Resident Engineer then in charge.

A memorandum has been received from the Government of India as to the strength of girder bridges throughout the line, and from the weight there suggested for a typical engine it would appear that much heavier engines than those now in use may be anticipated in the future. It will however be found that very few plate girders now on the line will be strong enough for the type of engine foreshadowed by the memorandum referred to.

Stations.—Provisional sanction to proceed with the alterations and additions to the Bangalore City station was received on the 4th September 1893, but the Southern Mahratta Railway authorities have not yet agreed to hand over the land we require and which, as we work the joint station, we undoubtedly should have. A very thorough inspection was made of the village which has sprung up outside Jalarpet station. It appears however, that for the present at all events, Government are unwilling to incur the expenditure which would be necessary to acquire the houses and the land on which they stand. There can be little doubt that some time or other this village, the sanitation of which is no better than that of Indian villages generally, will have to be bought up, and the thatched houses which are built without regard to sanitary rules, removed. The station houses and their surroundings, as well as all staff quarters, are clean and neat and the yards kept free from noxious vegetation. Care has also been taken to encourage the growth of trees which at many stations now afford grateful shade to passengers.

Extensions of Platforms and Through Sidings completed during the half-year ending 30th June 1893.

Platforms.	Through sidings.	Platforms and through sidings.
Manur		
Molagavalli		

Distant Signals.—The 176 distant signals sanctioned as per G. O. No. 2,078 R., dated 9th September 1891, have all been put up and are in working order.

Wells.—The wells on the North West Line, with the exception of that of Thocock at 83rd mile, N. W. Line, which supplies Renigunta, gave an ample supply during the half-year. The new well at Raichur is a great success and the supply promises to be ample for the requirements of both the G. I. P. Railway and ourselves.

It is proposed next year to make provision for special schemes with a view to improving the water-supply at Whitefield, Podanur, Arkonam and Cuddapah, and for enlarging the existing wells at Mullapuram, Sankaridrug and Erode so as to ensure an ample supply of water for locomotive purposes at these important stations.

I have the honor to be,
Gentlemen,
Your most obedient servant,

H. R. P. CARTER,
Chief Engineer.

From E. W. STONEY, Esq., Officiating Deputy Chief Engineer, Madras Railway, to the Officiating Chief Engineer, Madras Railway, dated Madras, 15th May 1893.

I beg to forward my report on the way and works of the Madras Railway for the half-year ending 31st March 1893, together with an abstract of the cost of maintenance for that period.

SOUTH-WEST LINE.

1. *Earthwork*.—The banks and cuttings throughout are well maintained and in good order.

2. *Fencing*.—This is generally in good order, but wherever weeds and creepers grow luxuriantly as on the Mallapuram ghat, there is great difficulty in preventing the aloes being killed by them.

The cattle trespass for the half-year is as follows: In many cases I believe that cattle do not get across the fences, but come through level-crossing gates, or are driven in at night through them by their owners to feed on the grass within the railway fences:—

Divisions.								Number of cases.
1st Division, South-west line	...	...	...	...	...	...	...	9
2nd do. do.	...	...	...	...	...	...	...	2
3rd do. do.	...	...	...	...	...	...	...	3
4th do. do.	...	...	...	...	...	...	...	2
Total ...								16

3. *Bridges*.—The Tootha bridge was opened for traffic on the 21st January 1893, and the limit of speed was removed on the 3rd April 1893.

Screw pile piers are being placed under the centres of the weak girders at 395/5, and an estimate for the protective works required below the bridge to prevent damage by floods to the existing floor and adjoining bank slopes has been sent up for Government sanction.

The timber flooring of Kalpathi bridge has been taken up, and all joists and planks which required it have been renewed.

4. *Stations*.—The station yards, buildings and staff quarters are all in good order and well maintained; at Walyar, however, the station compound needs to be improved, those on the 3rd Division and at Pódanúr being specially noticeable for their uniform general neatness.

5. *Wells*.—The water-supply is good, and so many auxiliary wells have been constructed between stations, that an ample supply for all traffic requirements is secured.

Piping is being laid from the well at 132/16 to Jalarpét tank-house and a new steam pump has been erected at this well.

6. *Distance Signals*.—There are 95 stations on the South-west line; of these, 74 have distant signals on both sides, 8 on one side, and at 13 they have still to be erected.

7. *Trial Stations*.—The following trial station has been opened during the half-year:—
Lathari at 85/4 miles between Kátpádi and Virinjipuram.

8. *Permanent-way—1st Division*.—Section 1 is in good order, with the exception of the following places: 1/3-4, 8/18 which were a little rough.

On section 2 the road is generally very good, but portions between Trivallúr and Kadambatúr and between Manur and Chinnamápét are not so smooth; the portions of the up-line laid with 30 feet steel rails for some time are particularly good, the joints especially not being noticeable.

On sections 3 and 4 the road is very good except at 60/9 to 18 and 63/4 on section 3, where there was some oscillation.

On section 5 too the running was very good with the exception of a small portion over recently-turned rails at 109/6-8.

On the 2nd Division, section 1 is now in very good order.

Section 2 is very much improved and is now in good condition. Some ballast is required near Kolar road and between Gudupalli and Kuppam.

Section 3 is in excellent order.

On section 4 the permanent-way is also very good; some places between Tirupatúr and Kagankarai are not, however, as smooth as the remainder of the section.

3rd Division.—The running on sections 1 and 2 was very smooth and uniform and the road is in excellent order; the length between Salem and McDonald's choultry has been improved.

Sections 3 and 4 are also in first-rate order except portions between Erode and Perundurai which are not equal to the general high standard of this division.

4th Division.—Section 1 is now in very good order, and has been much improved in the last year in every way.

On section 2 between Olavakode and Parli is fairly good, the remainder of the sections except 344/16 to 345/1 and 350/7-9 is good; but there is a great want of uniformity in the maintenance, some short portions being very good and others indifferent; the Inspector should pay more attention to the general improvement of the section so as to make the permanent-way more evenly good throughout.

The road on section 3 has been improved and is now very good, except at entering and leaving curves, especially reverse ones; the superelevation needs adjustment so as to make the transition from straight to curve, or curve to curve less marked when running fast.

From Tirur to Kadalundi section 4 is very good, but there was oscillation between Kadalundi and Ferok, which is not so smooth as it should be, considering that it is laid with 75 lb. steel rails. The road on the Nilgiri Branch is in very good order, but between Pōdanūr and Coimbatore is not so good as the remainder.

9. *Acquisition of Land.*—The following statement gives particulars of lands applied for and not yet handed over by Government:—

Stations.	Purpose for which it is required.	Date of application.
Totiapalaiyam ...	Station purposes ...	25th Feb. 1893.
Pattambi ...	Do. ...	16th July 1892.
Avadi ...	Station purposes. <i>N.B.</i> —Only a portion of land was handed over in December 1892 ...	24th August 1892.
Mosur ...	Station purposes ...	25th " "
Ketandapatti ...	Do. ...	13th September "
Vinnamangalam ...	Do. ...	5th " "
Arkonam ...	Staff quarters ...	16th " "
At 108¼ miles ...	For drainage ...	22nd " "
Jalarpet at 132/16-17, Bangalore Branch ...	Enlarging auxiliary well ...	12th November "
Perambūr works... Do. ...	Staff quarters and station purposes ...	27th February 1893.
Kulipalaiyam ...	For station purposes only ...	27th " "
Jalarpet ...	Station purposes ...	13th March "
Méttupalaiyam ...	Do. ...	5th April 1892.
	Do. ...	6th March 1893.

10. *Stone covering.*—Ballast has been covered with stone for a length of 128.6 miles as shown below:—

Divisions.		Length of main line.		Miles covered with stones.	
		MS.	MS. CHS.		
1st Division, South-west line	Double line ...	85	9	11	
	Single line ...	91	1	40	
2nd Division, South-west line	...	136½	35	0	
3rd do. do.	...	121	72	12	
4th do. do.	...	139½	11	0	
Total		572½	128	63	

On the 3rd Division the effect has been most marked in preventing dust, as previous to the ballast being covered, from Salem to Uttukuli was very dusty.

The stone used in some places, especially on the double line between 34th mile and Arkonam, is in my opinion too small, as when stones under about 1½" cube are used they get buried and lost in the ballast during their removal for opening and packing the road.

11. *Steel rails.*—There are now 224½ miles of 75 lb. 20 feet steel rails laid in the South-west line and 24 miles of new 75 lb. 30 feet steel rails on the up-line between Arkonam and Madras. The following table shows the number of miles of each fished with new pattern steel fish plates with 4-1" bolts and with old type iron fish plates and 4-½" bolts:—

Divisions.		Steel rails fished with			
		New type fish plates.		Old type fish plates.	
		MS.	CHS. FT.	MS.	CHS. FT.
1st Division, South-west line	...	40	62 64	73	60 50
2nd do. do.	...	5	9 0	42	35 0
3rd do. do.	...	4	47 64	35	59 51
4th do. do.	...	3	22 0	33	38 0
Total		53	61 62	185	33 35

12. *Points.*—The following table shows the progress made in altering the fishing of switches:—

Divisions.	Total points to be done.	Now completed.	Still to be done.
1st Division, South-west line	...	All completed except at Ambatur and Avadi. 204 183 16 (11 of which not done as they are of old muster home and heel chair).	
2nd do. do.	...		
3rd do. do.	...	All completed.	
4th do. do.	...		

The following is a statement showing the progress of works:—

<i>Ráyapuram</i> —			
30-ton weigh bridge and weigh bridge office	...	Completed.	
Alterations of sidings, &c., at west end of the yard	...	Do.	
Grouping of points	...	In progress.	
<i>Salt Cotaurs</i> —			
Flagging delivery shed	...	Collecting materials.	
<i>Central Station</i> —			
Proposed tank	...	Completed.	
Dispensary and Apothecary's quarters	...	Foundation in rails being spread for testing foundation.	
<i>Perambūr works</i> —			
Assistant Locomotive Superintendent's bungalow.	...	Waiting for land.	
Four sheds at west end of carriage shop	...	Completed.	
Paving with cement and fixing sky lights in carriage shop	...	Do.	
Extension to drawing office	...	Do.	
Level crossing gate at 1/19 miles	...	Indented for gate on Terminal Workshops.	
<i>Konnur</i> —			
Relief siding	...	Completed.	
<i>Avadi</i> —			
Extension of platform	...	Do.	
<i>Tinnanūr</i> —			
Extension of platform	...	Do.	
<i>Kadambatūr</i> —			
Extension of platform	...	Do.	
Road goods room	...	Do.	
<i>Manur</i> —			
Proposed platform	...	Nearly completed.	
<i>Mosur</i> —			
Proposed platform	...	In progress. Dry stone wall completed. Waiting for land.	
<i>Arkonam</i> —			
Assistant Traffic Manager's bungalow	...	Completed.	
Guards' bungalow	...	Completed with the exception of hanging door and window shutters and pointing.	
Alterations and additions to Signallers' bungalow.	...	Nearly completed.	
Depôt siding, &c.	...	Work stopped as the Traffic Manager thinks that it will interfere with his proposed scheme.	
<i>Kátpádi</i> —			
Watering arrangement	...	Completed.	
Double bungalow for Signallers	...	Nearly completed.	
Lightning conductors to goods shed and station-house	...	In progress.	
<i>Uli Station</i> —			
Extension of platform	...	Completed.	
<i>Tirupatūr</i> —			
Extension of lay-bye and loading bank	...	Do.	
<i>Kallari</i> —			
Proposed through siding	...	Do.	
One house for subordinate staff	...	Do.	

Thinnapatti—

Goods shed road or feeder road Completed.
 Engineman's house at 204½ miles Do. A verandah and another room to be added.

Salem Station—

Additions to Stationmaster's house Completed.
 Well 20' x 20' at 230½ miles near Sankeridroog Do.

Erode Station—

Running Guards' bungalow Do.
 30-ton weigh bridge and office Do.

Vizianagalam—

Goods godown and loading bank Do.

Mangalam—

Stationmaster's house Ordered not to commence work as there is some misunderstanding about land handed over.

Pōdanūr Station—

Guards' bungalow Completed.
 Assistant Traffic Manager's office Do.
 Alterations and additions of sidings Do.

Olarakōde—

Alterations and additions to Signallers' bungalow Do.
 Alterations and additions of sidings Do.

Pālgat—

Goods shed and extension of siding Excavation finished, concrete for foundation being put in.
 30-ton weigh bridge Half done.
 Diversion of road Completed.

Mankarai—

Station-house Do.
 Substituting stronger girders, &c., for Tootha bridge Almost complete; girder work all done; only west diversion to show and pitching to finish.

Edakkolam—

Station-house Completed.
 Strengthening bridge at 395th mile Only lay-bye finished; piles commenced.

Parpanangadi—

Goods shed, &c. Completed.

Ferok Station—

Third line and goods godown Do.

Kullai—

Proposed siding Do.

Calicut—

Two bath-rooms for each of the three Guards' bungalows Do.

NILGIRI BRANCH.**Coimbatore—**

Extension of goods shed, &c. Do.

Mettupālaiyam Station—

Alterations and additions consequent on the junction arrangement of the Nilgiri Railway with the Madras Railway Company Earthwork in progress, materials being collected.

BANGALORE BRANCH.**Jalarpet Station—**

Semaphore and signal cabin for grouping points. Completed.
 Flagging covered portion of platform Do.
 Shed for sheltering carriages Work done up to roof level and waiting for couples.
 Double bungalow for family guards Completed.

Third line lay-bye, goods godown and foot bridge extension In progress and waiting for land.
 Additions to the Assistant Traffic Manager's office Completed.

Watering arrangement In progress pipes being laid.
 Stand-pipes and piping In progress.
 Converting old dispensary into Firemen's house Completed.

Six bungalows for family guards, Running Drivers, Stationmasters and Locomotive Foreman and Firemen In progress.

Patchur Station—

Oil and store-room Completed.

Mulanur—

Oil and store room and native latrine Do.

Gudupalli Station—

Quarters for traffic staff Do.

Proposed lay-bye Do.

Single 20-feet opening in lieu of two 4' 3" and 6' culverts at 166½ miles, Bangalore Branch Do.

Kāmasamudram—

Stationmaster's house Do.

Rail, staging and bucket-lift at 175½ miles, Bangalore Branch Not wanted.

Malur Station—

Extension of through siding Completed.

Bangalore Cantonment—

Paving the sides of engine shed and filling up pits to standard depth Do.

Bangalore City—

Subordinate houses for Traffic department and sandalwoodkoti Walls built up to roof level.
 Goods shed office Walls built up to 11 feet above floor level, being roofed in.
 Extension of goods shed and loading bank Completed.

Memorandum of renewals and cost of maintenance.

Renewals.	1st Division, South-west line, pots renewed during half-year, No. 792 or 74			
	per mile per annum.	do.	do.	403 or 5.1
	2nd Division do.	do.	do.	310 or 4.6
	3rd Division do.	do.	do.	166 or 2.0
	per mile per annum.	do.	do.	
	4th Division do.	do.	do.	
	per mile per annum.	do.	do.	

Cost of maintenance.—A reference to the accompanying abstract will show the cost of maintenance to have averaged during the half-year (October 1892 to March 1893 inclusive) Rupees 114-5-8½ per mile per mensem or Rs. 1,372-4-9½ per mile per annum including sidings. The extra expenditure for the half-year ending 31st March 1893 is as follows:—

	RS.	A.	P.
Additional works chargeable to revenue	10,371	13	8
Grouping points at Central Station, Jalarpet, &c.	1,278	2	8
Covering dusty portion of the line with broken stones	971	8	0
Repairing breaches at 166½ and 168½, Bangalore Branch, and bridges erected in connection with it	2,647	1	3
Watering arrangement at Jalarpet steam pump and shed.	802	3	6
Substituting stronger girder for Tootha bridge	58,746	3	2
Junction arrangement at Mettupālaiyam	21	0	0
Excess over amount allowed for loss by exchange	59,646	15	2
Total	1,34,484	15	5

equal to a charge of Rs. 33-12-8½ per mile per mensem, which being deducted from the total cost (Rs. 114-5-8½) would give Rs. 80-9-0 as the ordinary cost of maintenance.

The expenditure for the half-year ending 30th September 1892 was Rs. 115-0-1½ per mile per mensem or Rs. 1,380-1-5 per mile per annum including sidings.

Divisional Expenditure.—The detailed expenditure on the several divisions including extra-ordinary expenditure has been as follows:—

Divisions.	Half-year ending 31st March 1893.	Half-year ending 30th September 1892.
1st Division, average cost per mile per mensem	Rs. A. P.	Rs. A. P.
2nd do. do. do. ...	150 1 4½	159 14 8½
3rd do. do. do. ...	87 14 3½	100 9 6
4th do. do. do. ...	54 10 8½	80 12 6½
	142 11 11½	98 13 1½

Rails.—1,310 defective rails have been removed from the main line and 956 rails worn out on the top table have been inverted during the half-year.

NORTH-WEST LINE.

13. *Earthwork.*—The banks and cuttings are generally in good order throughout.

14. *Fencing.*—The vegetable fencing is generally in fairly good order, but between Tirutani and Nagari the aloes have been injured in many places by prickly-pear.

The cattle-trespass for the half-year is as follows:—

Divisions.	Number of cases.
1st Division, North-west line	18
2nd do. do.	3
Total ...	21

15. *Bridges.*—There seems to be bent rails on many of the larger spans fitted with new permanent-way on the 1st Division, which cause oscillation; this was particularly noticeable at Kodur bridge (107/10-11 miles).

The work of placing extra girders outside the 23 weak spans of the Cheyair bridge was commenced in February 1893 and very good progress has since been made; all the extra girders are in place and rivetted up, and the work of fixing extra plates to the flanges of the rolled beams is in active progress; it is hoped that the strengthening of this bridge will be finished about the end of August.

16. *Stations.*—All the station yards, buildings and staff quarters are in good condition and well maintained, except Vontimitta compound, which was not at all clean behind the porters' huts. Gooty was specially noticeable for its neatness; extra sidings are being laid at Raichur. The floor of the goods shed at Kamalapuram needs to be taken up, levelled and re-laid as many of the flags are broken and the remainder have sunk and are very uneven.

17. *Wells.*—These have now a good supply of water at Raichur, the south well has been enlarged to its full depth, and the stone lining just commented.

18. *Distant Signals.*—Of the 44 stations on the North-west line 24 have been provided with distant signals on both sides and 4 with these on one side only, while 16 still remain to be done.

19. *Trial Station.*—The following trial station was opened during the half-year:—Kalamala at 190/11 miles between Yerraguntla and Muddanur.

20. *Permanent-way—1st Division.*—On section 1 the road was in good order except at 53/15 to 54/3 and at 64/10.

Section 2 is well maintained and in very good running order.
On section 3, with the following exceptions, the road was generally very good: Kodur bridge and 127 to 128 miles where there was oscillation.

Section 4 is generally good, but 146/9-12 and 158 to 159 miles are rough.
Section 5 is not so good as on my last inspection, several girder bridges require attention, and there was some oscillation at 165/7 and 170/6 to 171 miles.

On section 6 the line was in very good order with the exception of 204/4 and the girder bridges at 207/4 and 207/7, which were a little rough.

2nd Division.—Section 1 was generally very good with slight exceptions at 219/3 and 232/18.

On section 2 with few exceptions the road was generally very good; the bank from 240/10 to 18 was however rough as was also 246/6-8.

Section 3 with the exception of the portion between 293/6 and Aspari was very well maintained.

On section 4 between Aspari and Kupgal was fairly good, the following rough places being noted, viz.: 297/2, 298/8, 300/11, 304/10, 310/2-6; between Kupgal and Kosgi the road was very good.

On section 5 the road is not as good as it might be at this time of the year, between Kosgi and Tungahbudra was good, but from that to Raichur was not up to our usual standard.

21. *Acquisition of Land.*—The following table shows the lands applied for, but not yet handed over by Government:—

Stations.	Purpose for which it is required.	Date of application.
Ponpadi ...	Station purposes ...	16th March 1892.
Tirutani ...	Station purposes (only a portion was handed over) ...	15th August "
Kalamala ...	Station purposes ...	26th January 1893.

22. *Stone Covering.*—The stone used in several places on short experimental lengths is, I consider, too small, and if the work is to be extended, much larger stone should be used as small stone gets lost when opening and packing; the only place where the dust is bad is between Nandalur and Vontimitta.

23. *Steel Rails.*—The following table shows the number of miles of each fished with new pattern steel fish plates with 4-1" bolts and with old type iron fish plates and 4-¾" bolts:—

Divisions.	Steel rails fished with					
	New type fish plates.			Old type fish plates.		
	MS.	CHS.	FT.	MS.	CHS.	FT.
1st Division, North-west line	3	72	17	62	18	35
2nd do. do.	0	11	34	28	9	39
Total ...	4	3	51	90	28	8.

24. *Points.*—The following table shows the progress made in altering the fishing of switches:—

Divisions.	Total points to be done.	Now completed.	Still to be done.
1st Division, North-west line	152	151	1
2nd do. do.	159	150	9
Total ...	311	301	10

The following is a statement showing the progress of works:—

<i>Tirutani</i> —			
Proposed three godowns	...	...	Work stopped (vide Chief Engineer's telegram, dated 8th March 1893).
<i>Nagari</i> —			
Proposed godown	...	...	Completed.
<i>Vapagunta</i> —			
Lay-bye and platform	...	...	Work stopped for want of land.
<i>Pudi</i> —			
Extension of platform, &c.	...	...	Completed.
<i>Rénigunta</i> —			
Extension of engine shed, &c.	...	...	Do.
Diversion of road	...	...	Do.
Double Guards' bungalow (to replace the two buildings sold to South Indian Railway)	...	...	In progress.
One block of four bungalows for European and Eurasian Firemen	...	...	Do.
Six houses for subordinate staff	...	...	Nearly completed.

Rajampet—

Six houses for subordinate staff ... Nearly completed.
 Strengthening weak girders over Cheyair bridge. In progress.

Nandalur—

Four houses for subordinate staff ... Completed.

Vontimitta—

One house for subordinate staff ... Do.

Siddharattam—

Extension of platform and through siding ... Do.

Cuddapah—

Six huts for scavengers ... Do.
 Six houses for subordinate staff ... Do.
 Strengthening weak girders over Rollavanka bridge. Do.

Gangayapalli—

Proposed station-house ... Do.

Krishnapuram—

Through siding ... Do.

Kamalapuram—

Proposed alteration and addition to station-house. Do.

Terraguntla—

Extension of a third-class waiting-room ... Do.
 Alterations of sidings, &c. ... Do.

Tadpatri—

Cross-over road, &c. ... Do.

Gooty Station—

Block of four houses for Native Drivers ... Completed with the exception of doors.
 Prosecuting Inspector's office ... Completed.
 Eight houses for Native Firemen ... Do.
 Dispensary ... Collecting materials.

Guntakal—

Road from east end of goods godown to Company's boundary ... Completed.

Molagavalli—

Proposed platform ... Do.

Kosgi Station—

One house for subordinate staff ... Do.

Matmari—

Proposed pointsman hut ... Collecting materials.

Raichur Station—

Transshipping shed, &c. ... Completed.
 Open shed over loading bank ... Do.
 Filling up engine pits ... Do.
 Enlargement of locomotive well ... Excavation finished and lining commenced.
 New coal siding ... Completed.
 Alterations and additions of siding between station-house and engine shed ... In progress.

Memorandum of Renewals and Cost of Maintenance.

Renewals { 1st Division, pots renewed during half-year, No. 832 or 8-9 per mile per annum.
 { 2nd do. do. do. " 169 or 2-1 do. do.

Cost of Maintenance.—A reference to the accompanying abstract will show the cost of maintenance to have averaged during the half-year (October 1892 to March 1893) Rs. 92-1-7½ per mile per mensem or Rs. 1,105-3-6 per mile per annum including sidings.

The extra expenditure for the half-year ending 31st March 1893 is as follows:—

	RS.	A.	P.
Additional works chargeable to Revenue	8,998	10	9
Strengthening Matagapalli bridge and substituting stronger girders for Rollavanka bridge	2,349	2	2
Rénigunta engine turn-table 45 feet	6,065	1	3
Excess over amount allowed for loss by exchange	20,384	5	2
Total	37,797	3	4

equal to a charge of Rs. 18-2-9 per mile per mensem, which being deducted from the total cost (Rs. 92-1-7½) would give Rs. 73-14-10½ as the ordinary cost of maintenance.

The expenditure for the half-year ending 30th September 1892 was Rs. 112-5-2½ per mile per mensem or Rs. 1,348-2-8½ per mile per annum including sidings.

Divisional Expenditure.—The detailed expenditure on the several divisions has been as follows:—

Divisions.	Half-year ending 31st March 1893.	Half-year ending 30th September 1892.
1st Division, North-west line	RS. A. P. 104 1 8½	RS. A. P. 135 13 11½
2nd do. do.	78 0 4½	84 11 11

Rails.—499 defective rails have been removed from the main line and 778 rails worn out on the top table have been inverted during the half-year.

MADRAS RAILWAY COMPANY,
LOCOMOTIVE SUPERINTENDENT'S OFFICE,
PERAMBUR WORKS, 29th September 1893.

L. S. MOSS, Esq.,
Agent and Manager,
MADRAS RAILWAY.

SIR,

I have the honour to submit my report on the working of the Locomotive and Carriage and Wagon Departments for the half-year ending 30th June 1893.

2. A tabular statement is enclosed, showing in detail, the expenditure under each of the several heads of account, as compared with the figures for the preceding and corresponding half-years. The figures for the half-year under review include an abnormal charge of Rs. 62,402-9-0, the cost, as delivered in India, of 2 new Locomotive engines and tenders, chargeable to Revenue. With a view to allowing a fair comparison to be made with former half-years, I have had printed in red ink, figures showing the ordinary expenditure of the Department when this special charge is removed.

3. The general totals for the 3 half-years including and excluding the abnormal charge referred to above are as follows:—

Half-year ending	Mileage.	Including all Charges.						Excluding charge on account of two new Engines.					
		Total Cost of Department.			Total Cost per Mile.			Total Cost of Department.			Total Cost per Mile.		
		RS.	A.	P.				RS.	A.	P.			
June 1892 ...	1,481,908	12,40,003	12	6	0	13	4 66	12,40,003	12	6	0	13	4 66
Dec. " ...	1,502,333	11,37,983	9	6	0	12	1 44	11,37,983	9	6	0	12	1 44
June 1893 ...	1,527,934	12,64,279	0	8	0	13	2 86	12,01,876	7	8	0	12	7 02

a comparison of these figures shows the final results to be:—

	Including all Charges.		Excluding charge on account of two new Engines.	
	Half-year ending 30th June 1893 as compared with		Half-year ending 30th June 1893 as compared with	
	Preceding half-year.	Corresponding half-year.	Preceding half-year.	Corresponding half-year.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Miles run ...	Increase 1 70	Increase 3 11	Increase 1 70	Increase 3 11
Total cost of department, including working and repairs of engines and vehicles, loss by exchange, carriage of revenue stores, &c. ...	Increase 11 10	Increase 1 96	Increase 5 61	Decrease 3 07
Total cost as above per mile ...	Increase 9 23	Decrease 1 12	Increase 3 84	Decrease 6 00

4. The total expenses of the Department compare favourably with the corresponding period of 1892, the cost per mile, including the charges on account of the new engines,

being 1.12 per cent. less; excluding the cost of the new engines, the decrease is 6 per cent. Compared with the half-year ending 31st December 1892 the results are not so satisfactory, but a reference to the appendix statement will show that the excess is mainly due to a heavier expenditure on "Locomotive Engines: Repairs" and "Carriages and Wagons: Repairs" which I deal with further on.

5. I beg to draw your attention to the figures representing loss by exchange and carriage of revenue stores, viz.: Rs. 1,16,050. Of this sum, Rs. 84,300 is on account of loss by exchange and is very little less than 7% of the total cost of working the Department. The charge against the Department for the half-year under report exceeds by 61.31% and 84.00% the figures for the corresponding and preceding half-years, respectively.

Locomotive Engines: Running.

6. I am glad to be able to record a slight reduction in the general cost per mile under this heading, as compared with the two previous periods.

7. There is a slight reduction in the total amount paid for "Wages and Salaries" during the half-year, as compared with the preceding and a slight increase as compared with the corresponding period, but the increase is fully accounted for by the extra mileage run. The cost per mile, it will be noticed, is slightly below that of either of the two previous half-years.

8. The average cost per mile of coal, patent fuel and firewood consumed on engines is practically the same as in the two previous half-years, but an increase in consumption has enhanced the cost per mile. The heavier consumption is mainly due to the fact of our having been obliged to keep engines, which were not in the best of repair, at work on the main line and to the increased loads and quicker speed of many of the regular trains. The additional 10 new goods engines now being turned out of the shops will give relief to the strain that has existed for some considerable time, and I hope that in the near future there will be a reduction in the average mileage consumption of fuel.

Locomotive Engines: Repairs.

9. The total amount of money expended on repairs and renewals of engines during the half-year, has been in excess of that for either of the two previous half-years, but when the abnormal debit to this head of the cost of the two revenue engines is deducted, the amount expended is Rs. 2,730 less than that of the corresponding period of 1892. The excess of Rs. 10,410 over the expenditure of the preceding period is accounted for by the cost of valuable stores having been charged off to the last 3 of the 4 P. B. class engines which are being renewed in the Company's workshops.

10. Thirty-four engines passed through the shops for repairs during the half-year, as compared with 40 and 35 dealt with in the half-years ending December 1892 and June 1892, respectively. With few exceptions, the work required to be done on each engine has been very heavy, entailing a considerable amount of machine work as well as erecting shop labour. Had it been possible to get through more work in the shops, more engines would have been dealt with.

11. The increase in the amount of wages paid under the heading now being dealt with is due to the excessive overtime which it is found absolutely necessary to insist on in order that work shall not be delayed in the shops, where the number of machine tools is very limited and the difficulty of complying with the steadily increasing demands of the running sheds becomes daily more accentuated.

Carriages and Wagons: Running.

12. The figures under this head are practically the same as those for the preceding and corresponding half-years, though the cost per mile works out slightly in favour of the period under report.

13. It having been decided at a recent meeting of the Committee of Locomotive and Carriage Superintendents that all first-class passenger carriages on Indian Railways should be coloured white, the double saloons and first-class composite carriages belonging to this Company are being painted accordingly. This style of painting is more costly than that previously adopted, and unless the very best paint and varnish are used, it is impossible to prevent the stock from very rapidly becoming shabby in appearance.

14. I regret that the question of the lighting of the Company's carriages with gas has not yet been disposed of. The oil lamps, which have been allowed to run down in anticipation of the gas being sanctioned, are now in a bad state of repair, and I understand from the Traffic Manager that unless the sanction asked for is shortly forthcoming, it will be necessary for him to arrange for the resilvering of the majority of the existing lamps and to obtain a large number of new ones, as the stock on hand is found to be insufficient to meet the requirements of his department during the trooping season.

Carriages and Wagons: Repairs.

15. The expenditure under this heading shows the very material reduction of Rs. 52,243 as compared with the corresponding period of 1892, and an increase of Rs. 25,493 as compared with the preceding period. The total number of vehicles that passed through the Works for repairs during the half-year under report was 2,567, or 346 in excess of that dealt with in the half-year ending December 1892. The increase in the expenditure is due to a larger number of vehicles having been repaired. The number of vehicles dealt with in the corresponding period of 1892 was 2,665.

16. The number of vehicles renewed during the half-year was:—

Brake vans	...	...	...	...	3
Covered goods wagons	...	...	...	...	10
Tool or accident vans	...	...	...	...	4
Total					17

and 6 brake vans and 4 oil tank wagons were built on Capital Account. The work of constructing 6 III. class carriages, 14 ballast wagons and 20 covered goods, which will be turned out during the current half-year, was also taken in hand and the work well advanced during the period under report.

17. More than half the floor space in the carriage building shop has been occupied for some time by the carriages being constructed for the South Indian Railway. This has prevented my turning out as many new Madras Railway vehicles as would otherwise have been the case.

Staff.

18. The only changes that have taken place during the half-year among the covenanted staff of this department have been as under.

19. Mr. R. Shortland, Tyro Shop Foreman, retired on the 5th June 1893, after a service of over 30 years, and was granted a gratuity of Rs. 4,200, equal to twelve months' pay.

20. Mr. O. Horrocks, Locomotive Foreman, proceeded on six months' sick leave to England on the 5th May 1893.

21. I have pleasure in reporting that the conduct of the staff has been uniformly good, and that all have discharged their duties satisfactorily.

I have the honour to be,
Sir,

Your most obedient Servant,

A. PILKINGTON,

Ag. Loco. Superintendent.

MADRAS RAILWAY.

Abstract of Expenditure for working and maintaining Locomotive Engines, Carriages and Wagons for the Half-year ending 30th June 1893. LOCOMOTIVE DEPARTMENT.

HALF-YEAR ENDING	Total Engine Miles worked.	LOCOMOTIVE ENGINES—Running.																																		
		WAGES AND SALARIES										COAL AND PATENT FUEL.								FIREWOOD.								OIL, TALLOW, WASTE, &C.				Total Cost.		Cost per Mile.		
		Drivers and Firemen.		Cleaners, Water and Fuel Coolies.		Total.		Cost per Mile.		Total Consumption.		Per Mile.		Total Consumption.		Per Mile.		Average Cost per Mile of Coal, Patent Fuel and Firewood.	Actual Cost.		Cost per Mile.															
										Quantity.	Cost.	Quantity	Cost.	Quantity.	Cost.	Quantity.	Cost.																			
		RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	CWTS.	RS.	A. P.	LBS.	RS.	A. P.	LBS.	RS.	A. P.	LBS.	RS.	A. P.	LBS.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.
June 1892	1,431,908	1,54,232	8 5	37,995	8 2	1,92,278	0 7	0	2	091	201,263	11 2	1,41,308	9 5	37 56	0 3	9 21	86,338,000	1,94,260	8 0	97 91	0 3	6 30	0 3	7 48	25,363	2 3	0	03 29	5,53,210	4 3	0	5	11 68		
December 1892	1,502,333	1,56,481	5 2	37,803	4 11	1,94,284	10 1	0	2	083	205,666	11 2	1,44,054	10 9	37 92	0 3	9 52	91,400,500	1,94,226	1 0	102 14	0 3	5 67	0 3	7 23	25,785	9 11	0	03 30	5,58,350	15 9	0	5	11 36		
June 1893	1,527,934	1,57,214	5 11	36,400	13 2	1,93,615	3 1	0	2	033	208,689	11 2	1,45,515	11 4	38 16	3 9	6 62	95,502,500	2,02,894	12 9	104 32	0 3	6 55	0 3	7 78	25,164	4 3	0	03 16	5,67,189	15 5	0	5	11 27		

HALF YEAR ENDING	Total Engine Miles worked.	LOCOMOTIVE ENGINES—Repairs.										LOCOMOTIVE ENGINES—Gross Cost of Running and Repairs.																							
		Cost of						Total Cost.				Cost per Mile.				Running, Total Cost.				Repairs, Total Cost.				Proportion of Supervision and Office Expenses.				Total Cost.				Cost per Mile.			
		Material.		Wages of Workmen.				Total Cost.		Cost per Mile.		Running, Total Cost.		Repairs, Total Cost.		Proportion of Supervision and Office Expenses.		Total Cost.		Cost per Mile.															
		RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.							
June 1892	...	1,481,908	96,857	4	8	1,64,419	14	7	2,61,307	3	3	0	29-86	5,53,210	4	3	2,61,307	3	3	57,496	5	6	8,72,013	13	0	0	9	499							
December 1892	...	1,502,333	86,100	1	0	1,62,067	14	0	2,48,167	15	0	0	27-72	5,58,350	15	9	2,48,167	15	0	57,285	0	1	8,63,803	14	10	0	9	239							
June 1893	...	1,527,934	1,31,993	12	10	1,68,441	11	9	3,00,435	8	7	0	31-75	5,67,189	15	5	3,00,435	8	7	56,793	12	3	9,24,419	4	3	0	9	816							
			90,137	13	10				2,58,577	9	7	0	28-41				2,58,577	9	7				5,52,561	5	2	0	9	297							

Figures in red show actual expenses during half-year ending June 1893, after deducting a sum of Rs. 62,402-9-0, being an abnormal charge due to replacement, at the cost of Revenue, of 2 Locomotive Engines.

CARRIAGE AND WAGON DEPARTMENT.

HALF-YEAR ENDING	Total Engine Miles worked.	CARRIAGES AND WAGONS—Running.										CARRIAGES AND WAGONS—Repairs.										CARRIAGES AND WAGONS—Gross Cost of Running and Repairs.																											
		Cost of						Total Cost.				Cost per Mile.				Cost of						Total Cost.				Cost per Mile.				Running, Total Cost.				Repairs, Total Cost.				Proportion of Supervision and Office Expenses.				Total Cost.				Cost per Mile.			
		Material.		Wages of Workmen.												Material.		Wages of Workmen.																															
		RS.	A. P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.							
June 1892	...	1,481,903	14,179	2	8	18,187	15	6	32,367	2	2	0	0	419	1,19,989	6	6	1,09,936	6	1	2,29,925	12	7	0	2	570	32,367	2	2	2,29,925	12	7	18,152	9	6	2,80,445	8	3	0	3	033								
December 1892	...	1,502,333	13,358	4	2	18,297	12	0	31,656	0	2	0	0	401	59,7	4	10	92,404	4	1	1,52,189	8	11	0	1	745	31,656	0	2	1,52,189	8	11	13,397	6	2	1,97,242	15	3	0	2	121								
June 1893	...	1,527,934	13,671	7	7	18,187	4	7	31,858	12	2	0	0	400	87,425	5	7	1,77,682	5	4	0	1	1033	31,853	12	2	1,77,682	5	4	14,393	2	5	2,23,934	3	11	125	2	1	2,23,809	1	10	0	2	412					

SUMMARY—Total Gross Cost of Working the Locomotive and Carriage and Wagon Departments.

HALF-YEAR ENDING	Locomotives, Total Cost.			Carriages & Wagons, Total Cost.			Total Cost.			Cost per Mile.			Loss by Exchange and Carriage of Revenue Stores			Final Total Cost of Working.			Total Cost per Mile.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
June 1892	8,72,013	13	0	2,80,445	8	3	11,52,459	5	3	0	12	532	87,544	7	3	12,40,003	12	6	0	13	466
December 1892	8,63,803	14	10	1,97,242	15	3	10,61,045	14	1	0	11	360	76,936	11	5	11,37,983	9	6	0	12	144
June 1893	9,24,419	4	3	2,23,809	11	0	11,48,228	6	1	0	12	028	1,16,050	10	7	12,64,279	0	8	0	13	286

PERAMBUR WORKS,
29th September 1893.

A. PILKINGTON,
Ag. Locomotive Superintendent.

C 1436 A & M.

MADRAS RAILWAY COMPANY,
TRAFFIC MANAGER'S OFFICE,
MADRAS, 7th October 1893.

To

THE AGENT AND MANAGER,
Madras Railway Company,
ROYAPURAM.

SIR,

I have the honor to submit my report upon the traffic of the Madras Railway for the half-year ending 30th June 1893.

2. *Open Mileage*.—The open mileage was the same as in the corresponding half-year of 1892, viz., 810.

3. *Train Service*.—The train service during the half-year under review remained the same as during the last five months of the corresponding half-year in 1892.

4. *Rates and Fares*.—The 1st, 2nd and 3rd class passenger fares for the half-years ending 30th June 1892 and 1893 were the same as under.

First class	...	...	...	...	12 pies.
Second class	...	...	...	...	6 pies.
Third class, Mail	...	...	...	...	2½ pies.
Do. other trains	...	...	...	...	1½ pies.

The following changes in the Goods rates were made during the half-year:—

JANUARY.

Commodities.	Conditions.	Rates.	Alterations.	Rates.
Bark for Tanning and Bark Kounnam and Valam.	Packed 2nd class	13 61 pies.	{ Packed 2nd class Loose 3rd do.	13 61 pies. 18 pies.
Bonds of earth, glass, 1 2 or wood.	2nd class O. R. and if insured at C. R.	13 61 pies.	{ 3rd class Owner's risk 4th do. Company's risk 4th do. Owner's risk 5th do. Company's risk	18 pies. 24 pies. 24 pies. 36 pies.
Brass thread or lace	4th class O. R.	24 pies.	2nd do.	13 61 pies.
Bricks, fire, counted	1st do.	10 pies.	4th do.	24 pies.
Empty packages, new	3rd do.	18 pies.	2nd do. Owner's risk	13 61 pies.
Marbles playing, burnt clay, glass or lac	2nd do. O. R.	13 61 pies.	3rd do. Company's risk	18 pies.
Muriate of zinc or Chloride of zinc.	2nd do. O. R. 3rd do. C. R.	13 61 pies. 18 pies.	3rd do. Owner's risk 4th do. Company's risk	18 pies. 24 pies.

FEBRUARY.

Drugs imported	4th class	24 pies.	{ 4th class In wagon loads of 270 mds. at O. R. 2nd class.	24 pies. 13 61 pies.
Cast Iron pipes, loose, at O. R.	2nd do.	13 61 pies.	1st class O. R.	10 pies.
Pipes, gas	2nd do.	13 61 pies.	{ 1st do. O. R. 2nd do. C. R.	10 pies. 13 61 pies.
Pipes, water	2nd do.	13 61 pies.	If packed with straw 3rd class If loose O. R. only 1st class	18 pies. 10 pies.

FEBRUARY—Continued.

Commodities.	Conditions.	Rates.	Alterations.	Rates.
TRAFFIC BETWEEN CUMBUM AND CUDDAPAH.				
Grain and Seeds, common Tamarind.	In consignments less than 270 mds.	8 53 pies.	Between Cumbum and Cuddapah. Note—In competition with country carts.	6 15 pies.
Do. do.	In consignments of 270 mds. at O. R.	6 80 pies.		
Chillies, dried	3rd class	18 pies.	Do. do.	9 71 pies.
Tobacco	2nd do.	13 61 pies.		
Ghee	2nd do.	13 61 pies.		
Tobacco	2nd do.	13 61 pies.	Between Kistna Canal and Madras	4 38 pies.
Note—In competition with Canal.				

MARCH.

Alum	1st class	10 pies.	1st class O. R.	10 pies.
Brass or Copper vessels	1st "	10 pies.	2nd " C. R.	43 61 pies.
Brass or Copper sheets and Brass or Copper unmanufactured, not otherwise specified	1st class	10 pies.	2nd " O. R.	13 61 pies.
Machinery requiring the use of a truck.	2nd "	13 61 pies.	3rd " C. R.	18 pies.
Superphosphates, manure	1st "	10 pies.	Spl. class O. R.	8 pies.
			1st " C. R.	10 pies.
			For distances less than 100 miles, 3rd class.	18 pies.
			For distances of 100 miles and over, 2nd class.	13 61 pies.
			If in full wagon loads for distances of 300 miles and over at O. R.	1 pies.

APRIL.

Brass ware, ornamental	2nd Class	13 61 pies.	5th class	36 pies.
Empty drums used for transport of Carbonic acid gas and of Kerosine oil.	3rd Class	18 pies.	1st "	10 pies.
Empty returned Kerosine oil tank wagons	3 as. per mile	3 6 pies.	2 annas per mile	2 1 pies.
Parchment Coffee to Coimbatore				
From Mettupalaiyam	2nd Class inclusive of terminals	23 31 pies.	Inclusive of terminals	13 61 pies.
" Salem	do.	17 23 pies.		
" Kadiyampatti	do.	15 9 pies.		
" Mullapuram	do.	15 42 pies.	If in wagon loads of 81 mds. at O. R. from Madras to Bangalore, owners to load and unload.	8 pies.
Cast Iron pipes, loose	2nd Class C. R.	13 61 pies.		
	1st Class O. R.	10 pies.		
Sugar, Astagram, Ganjam or refined.	In wagon loads of 270 mds. at O. R. for distances of 100 to 200 miles.	6 pies.		7 50 pies.
Do.	do for distances of above 200 miles at O. R.	5 pies.		5 pies.

MAY.

Cotton pressed to more than 26 lbs. to the cubic foot	From via Guntakal to Madras	10 pies.	If booked from Guntur to Madras	7 25 pies.
Coal or Coal dust, loose or in bags in wagon loads of 270 mds. at O. R.	For distances of 101 to 175 miles	6 pies.	For distances of 101 to 165 miles	6 pies.
	For distances of 176 to 349 miles	5 pies.	For distances of 166 miles and over	4 pies.
	For distances of 350 miles and over	4 pies.		
Leather, common	2nd class O. R.	13 61 pies.	If booked from Cawnpur to Madras, 1st class	10 pies.
Do. Securely packed.	3rd " C. R.	18 pies.	Do. do.	10 pies.
Manufactured leather goods.	3rd "	18 pies.	2nd class	13 61 pies.
Piece goods, Cotton, English or American—pressed and iron-bound or in cases.	2nd class	13 61 pies.	For distances less than 100 miles, 3rd class	18 pies.
			For distances of 100 miles and over, 2nd class	13 61 pies.

JUNE.

Commodities.	Conditions.	Rates.	Alterations.	Rates.
Coal, loose or in bags, in wagon loads of 270 at O. R.	For distances 166 miles and over.	4 pies.	For distances 166 to 350 miles ... 4 pies. do. of 350 miles & over 3 pies.	
Coffee from Palni Hills from Dindigul to Calicut.	3rd class	18 pies.	If in full wagon loads via Erode to Calicut	11 pies.
Blasting Gelatine, Duoline Dynamite, Glaziline Lithofractor, Methylic Nitrate, Nitro Glycerine.	2 pies per maund per mile with a minimum charge of Rs. 3 per consignment.	54 pies.	2 pies per md. per mile subject to a minimum charge as for 27 mds.	54 pies.

TRAFFIC BETWEEN CUMBUM AND MADRAS.

Chillies, dried	3rd class	18 pies.	Between Cumbum and Madras	11 67 pies.
Tobacco	2nd "	13 61 pies.		
Ghee, Owner's risk	2nd "	13 61 pies.		
Do. Company's risk	3rd "	18 pies.		
Grain and Seeds, common, Tamarind raw, and Turmeric in small consignments		8 53 pies.		
Do. in consignments of 270 mds. at O. R.		6 80 pies.		
Do. do. for 200 miles and over		4 53 pies.	Do. do.	6 40 pies.
Jaggree in small consignments	1st class	10 pies.		
Jaggree in consignments of 200 mds. at O. R.		6 80 pies.		
Do. do. for distances of 200 miles and over		4 53 pies.		
Files, Mangalore or Calicut in wagon loads of 216 mds at O. R.	For distances of 400 miles and over	5 pies.	For distances of over 350 miles with out terminals	5 pies.

5. Traffic train miles.—The traffic train mileage for the June half-years of 1892 and 1893 is shown in the following table:—

Allocation.	Description of train.	1892.	1893.
		Miles.	Miles.
Coaching	Mail	319,141	317,780
	Passenger	140,131	142,663
	Special	5,141	6,439
	Troops	8,218	4,584
Mixed	Ordinary	526,924	521,528
Goods	Ordinary	132,912	133,682
	Extra	50,997	109,621
	Ballast Trains for construction	4,268	335
	Light Engines	25,997	25,247
	Maintenance	14,077	18,043
	Fuel	17,316	17,916
Total...		1,245,122	1,300,838

Excluding maintenance and fuel mileage the total train mileage was 1,264,879 against 1,372,909, for the corresponding period of 1892, or an increase of 51,150 miles, equivalent to 4.21 per cent. The decrease in the mail and mixed train mileage is due to the fact that the corresponding half-year, which was leap year, contained an extra day, and the increase in the passenger train mileage to the fact that the additional train between Madras and Trivellur introduced on 1st February 1892 ran for the whole of the half-year under report against only 5 months in the corresponding period. The slight increase in the mileage of ordinary goods trains is due to more Assisting Engines having been required over the Ghauts owing to the trains having been fully loaded and the increased extra train mileage to the greater tonnage of goods lifted.

Taking the figures as shown in the Capital and Revenue accounts where mixed and light Engine mileage is divided between the coaching and goods traffic, a decrease of 6,023 occurs in coaching and an increase of 57,173 in goods mileage.

6. *Gross and Net Earnings.*—Compared with the corresponding period of 1892 the gross earnings from all sources were Rs. 52,86,714 against Rs. 47,45,101 or an increase of Rs. 5,41,613 equivalent to 11·41 per cent. The net earnings have been Rs. 28,41,009 against Rs. 20,72,050. The working expenses were Rs. 24,45,705 against Rs. 26,73,052 or 53·73 per cent., and 46·26 per cent. respectively, of revenue. The average receipts per train mile work out to Rs. 4·06 against Rs. 3·81.

The increases and decreases in the several heads of the gross earnings are shown in the following table:—

Heads.	EARNINGS.		Increase.	Decrease.	Net Increase.
	June 1892.	June 1893.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Passengers ...	14,99,523	17,06,093	2,06,570	...	...
Troops and Police ...	88,694	65,805	...	22,889	...
Passengers' luggage ...	82,878	76,223	...	6,655	...
Parcels ...	1,01,956	1,15,188	13,232	...	...
Parcels (Revenue) ...	1,979	1,833	...	146	...
Horses, carriages, and dogs ...	45,702	41,801	...	3,901	...
Special trains ...	5,302	6,640	1,338	...	...
Goods ...	26,87,605	30,76,487	3,88,882	...	...
Goods (Revenue) ...	68,211	55,165	...	13,046	...
Railway material ...	26,879	4,700	...	22,179	...
Live stock ...	24,080	15,079	...	9,001	...
Rents and demurrage ...	4,572	5,090	518	...	...
Miscellaneous ...	5,557	9,128	3,571	...	...
Haulage of postal vans ...	11,636	11,525	...	111	...
Sundries ...	81,252	85,945	4,693	...	...
Telegraph ...	9,275	10,012	737	...	...
Total ...	47,45,101	52,86,714	6,19,541	77,928	5,41,613

7. The decrease in the working expenses is explained, as follows:—

Heads.	EXPENDITURE.		Increase.	Decrease.	Net Decrease.
	June 1892.	June 1893.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Permanent Way ...	6,72,733	4,07,981	...	2,64,752	...
Locomotive ...	9,36,121	10,19,866	83,745	...	...
Repairs to carriages & wagons ...	3,03,882	2,44,413	...	59,469	...
Traffic ...	4,28,522	4,42,083	13,561	...	...
General charges ...	2,70,909	2,86,717	15,808	...	...
Special and miscellaneous ...	60,885	44,645	...	16,240	...
Total ...	26,73,052	24,45,705	1,13,114	3,40,461	2,27,347

8. The receipts from passengers (exclusive of troops and police) were Rs. 17,06,093 against Rs. 14,99,523, or an increase of Rs. 2,06,570 equivalent to 13·77 per cent. The lowest class contributed in money 90·10 per cent. against 90·26 per cent. and in number 99·26 per cent. against 99·37 per cent.

9. The receipts from each class of passengers are shown in the following table:—

Half-years ending	First class.	Second class.	Third class.	Total.
	Rs.	Rs.	Rs.	Rs.
30th June 1893 ...	80,462	88,333	15,37,298	17,06,093
Do. 1892 ...	72,187	73,882	13,53,454	14,99,523
Increase in 1893 ...	8,275	14,451	1,83,844	2,06,570
Decrease in 1893 ...	...	...	...	...
Increase per cent. ...	11·46	19·56	13·58	13·77
Decrease do. ...	...	...	...	...

10. The numbers carried in each class were:—

Half-years ending	First class.	Second class.	Third class.	Total.
30th June 1893 ...	8,775½	28,527	4,998,677	5,035,979½
Do. 1892 ...	6,345½	20,210	4,259,953½	4,287,009
Increase in 1893 ...	1,930	8,317	738,723½	748,970½
Decrease in 1893 ...	...	...	...	...
Increase per cent. ...	28·19	41·15	17·34	17·47
Decrease do. ...	...	...	...	...

11. The percentage of numbers and average mileage of each class were:—

Period.	Percentage of numbers.			Average mileage.		
	First class.	Second class.	Third class.	First class.	Second class.	Third class.
Half-year ended 30th June 1893.	0·17	0·57	99·26	175	118	36
Do. do. 1892.	0·16	0·47	99·37	198	138	37

12. The average fare paid by each class of passengers was:—

Period.	First class.	Second class.	Third class.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Half-year ended 30th June 1893 ...	9 2 8	3 1 6	0 4 11
Do. do. 1892 ...	10 8 9	3 10 6	0 5 1

13. In the first class passenger traffic there was an increase of 11·46 per cent. in number and of 28·19 per cent. in money. In the 2nd class there was an increase of 19·56 per cent. in number and of 41·15 per cent. in money. In the 3rd class there was an increase of 13·58 per cent. in number and of 17·34 per cent. in money. The average sum paid by a third class passenger by all trains was annas 4·11, against annas 5·1. The average sum by Mail trains was annas 15·2, against annas 15·8, and the average sum by other trains annas 4·1, against annas 4·3. The percentage of numbers by Mail and other trains remained the same as in the corresponding half-year of 1892, viz., 7 and 93 respectively. The number of 3rd class passengers and the amount received for carrying them has been higher than in any previous half-year of the Company's history and as will be seen from para. 15 below the increase has been fairly equally distributed over all sections of our system.

14. Return Tickets including Festival Traffic.

Period.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending								
June 1893 ...	58	1,129	55	619	52,846	10,301	52,959	12,049
Do. 1892 ...	50	1,126	42	409	46,053	9,004	46,145	10,539
Increase ...	8	3	13	210	6,793	1,297	6,814	1,510
Decrease ...	...	...	...	...	...	...	...	...

15. The numbers of third class passengers booked by all trains on different sections of the line in the first half-years of 1892 and 1893, will be found in the following table:—

Between	Half-year ending June.		Increase per cent.	Decrease per cent.
	1892.	1893.		
Madras and Jalarpet ...	1,491,504	1,771,450	18.76	...
Bangalore Branch ...	391,387	477,982	22.12	...
Tirupatur and Erode ...	353,719	398,677	12.71	...
Perandurai and Coimbatore ...	316,073	348,814	10.36	...
Nilghiri Branch ...	96,377	103,989	7.89	...
Madukarai and Calicut ...	658,470	706,350	7.32	...
Tirutani and Cuddapah ...	442,980	508,361	14.75	...
Krishnapuram and Guntakal ...	280,953	301,036	7.15	...
Nancherla and Raichur ...	150,236	155,702	3.63	...
Ex-Great Indian Peninsula, Southern Mahratta, & South Indian Railways }	86,900	114,629	31.91	...

16. *Parcels.* Compared with the corresponding period of 1892 there is an increase of 11.8 per cent. in number and 13.0 per cent. in money. The increased revenue from parcels traffic has been principally due to a good Indigo season on the North-West Line.

The following table shows the number of parcels carried and revenue derived therefrom during the June half-year of the last 5 years.

Half-years ending June.	Number.		Receipts.		Total.	
	Local.	Foreign.	Local.	Foreign.	Number.	Receipts.
			Rs.	Rs.		Rs.
1889 ...	56,137	56,730	59,795	54,531	113,167	1,14,326
1890 ...	63,692	60,611	56,190	50,182	124,333	1,06,372
1891 ...	66,089	53,112	56,217	48,369	119,201	1,04,586
1892 ...	55,070	57,347	55,837	46,118	112,117	1,01,955
1893 ...	59,572	66,066	59,886	55,302	125,638	1,15,188

17. *Goods Traffic.* Compared with the corresponding half of 1892, the receipts from Goods traffic (exclusive of Railway Material and Revenue Stores) were Rs. 30,76,487 against Rs. 26,87,605, equivalent to an increase of 14.47 per cent. The tonnage lifted was 450,790 against 380,326 in the corresponding half-year or an increase of 70,428 equivalent to 18.52 per cent. The average receipts per ton lifted were Rs. 6.82 against Rs. 7.06, and the average receipts per ton per mile were pice 8.22 against pice 8.54. The receipts from Cotton were Rupees 1,32,934.

18. The following table represents the weight of and revenue from the Goods traffic carried for the public, for the five years ending June 1893.

Years.	Goods traffic exclusive of Madras Railway material and revenue stores.	Government stores and Foreign Railway material.	For the Public.	
			Weight.	Receipts.
	Rs.	Rs.	Tons.	Rs.
1889 ...	46,91,781	1,06,599	727,583	45,85,182
1890 ...	50,16,899	2,63,139	791,394	47,55,760
1891 ...	52,85,836	2,81,908	842,462	50,03,928
1892 ...	53,94,534	1,35,179	814,826	52,59,355
1893 ...	58,57,767	90,001	866,670	57,67,766

19. Statement showing earnings from and tonnage of Goods traffic for the half-years ending 30th June 1892 and 1893.

Detail.	Half-year ending June 1892.	Half-year ending June 1893.
Receipts from goods ...	Rs. 26,87,605	Rs. 30,76,487
Tonnage of goods ...	Tons 380,326	Tons 450,790
Average receipt, per ton lifted ...	Rs. 7.06	Rs. 6.82
Do. per ton per mile ...	Pice 8.54	Pice 8.22

20. The increase and decrease in each commodity composing the Goods traffic for the half-year ended 30th June 1893 appears in the following statement.

Description.	Increase.		Description.	Decrease.	
	Tons.	Rs.		Tons.	Rs.
Coal and Coke ...	6,837	32,459	Dyes and Tans ...	648	8,738
Cotton, unmanufactured ...	4,472	39,564	Leather, manufactured ..	810	12,283
Cotton, manufactured ...	584	4,828	Railway Plant and Rolling Stock ...	893	6,869
Grain ...	27,586	1,67,841	Salt ...	2,967	20,888
Hides and Skins ...	344	7,858	Stone and Lime ...	2,012	8,193
Jute ...	1,446	15,826	Coffee ...	198	2,350
Metals ...	2,128	17,769	Government Store ...	221	11,118
Oil seeds ...	10,791	55,686	Items less than 1,000 Rs..	422	3,333
Provisions ...	4,239	45,983			
Sugar ...	3,103	14,165			
Wood ...	7,210	27,978			
Tobacco ...	411	3,455			
Wool ...	141	1,476			
Manure ...	831	1,304			
All other articles of merchandise ...	7,269	25,181			
Items less than 1,000 Rs. ...	1,152	1,290	Net Increase ...	70,428	3,88,882
Total ...	78,629	4,62,654	Total ...	78,629	4,62,654

21. The total quantity of grain carried was 130,659 tons, yielding a revenue of Rs. 7,74,123 against 103,073 tons and a revenue of Rs. 6,06,282, or an increase of 26.8 per cent.

in weight, and of 27.7 per cent. in money. The average amount earned per ton hauled was Rs. 5.92 against Rs. 5.88.

22. The following table is designed to show the tonnage of grain sent from and received in each district during the half-years ended 30th June 1892 and 1893.

Districts.	1892.				1893.			
	Sent from.		Received in.		Sent from.		Received in.	
	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.
Madras ...	14,446	14.0	6,903	6.7	5,582	4.3	12,367	9.5
North Arcot ...	7,066	6.9	10,377	10.1	13,039	9.3	8,862	6.8
Salem ...	4,188	4.0	20,076	19.5	7,089	5.5	11,812	9.0
Coimbatore ...	4,277	4.1	12,842	12.5	740	0.6	38,351	29.4
Malabar ...	20,984	20.4	6,147	5.9	7,751	6.0	8,027	6.1
Cuddapah ...	1,506	1.5	7,086	6.9	4,586	3.6	4,781	3.6
Bellary ...	5,320	5.2	10,582	10.3	24,263	18.7	3,655	2.8
South Indian Railway.	3,492	3.4	4,628	4.5	2,571	2.1	21,146	16.2
Great Indian Peninsula Railway	24,949	24.2	33	...	5,210	4.0	274	0.3
Mysore Dominions ...	10,753	10.4	17,655	17.1	47,128	36.1	8,125	6.2
Intra ...	6,092	5.9	6,744	6.5	12,700	9.8	13,259	10.1
Total...	103,073	100.0	103,073	100.0	130,659	100.0	130,659	100.0

The principal feature of the above table is the large development of the grain traffic from Mysore to Coimbatore and the districts served by the South Indian Railway.

23. The tonnage of grain brought into Madras by Sea, by the Buckingham Canal, and by the Madras Railway, during the two periods under notice, was:—

Means of Transport.		1892.	1893.
		Tons.	Tons.
Sea ...	...	43,015	14,053
Buckingham Canal ...	...	7,229	32,109
Madras Railway ...	...	6,783	11,411
Total ...	...	57,027	57,003

24. The Cotton was contributed by the following stations:—

Stations.	Half-year ending 30th June 1892.			Half-year ending 30th June 1893.		
	Pressed Tons.	Loose Tons.	Total Tons.	Pressed Tons.	Loose Tons.	Total Tons.
Southern Mahratta Railway ...	575	139	714	1,585	454	2,039
Adoni ...	981	107	1,083	2,675	616	3,291
Raichur ...	441	320	761	21	217	238
Tadpatri ...	440	180	620	791	536	1,327
Tinnacherla ...	163	...	163	603	443	1,046
Nancherla ...	...	...	...	...	223	223
Muddanur ...	...	27	27	...	25	25
Yerraguntla ...	659	181	840	286	335	621
Krishnapuram ...	22	...	22	18	...	18
Great Indian Peninsula Railway ..	93	72	165	329	1	330
Tirupur ...	592	159	751	83	241	324
Coimbatore ...	492	66	558	309	45	354
Somanur ...	349	...	349	53	173	226
Erode ...	41	228	269	364	165	529
Sunkerydrug ...	...	95	95	...	184	184
Minor stations ...	17	128	145	3	261	264
Total	4,865	1,702	6,567	7,120	3,919	11,039

25. And was distributed as under:—

Stations.	Half-year ending 30th June 1892.			Half-year ending 30th June 1893.		
	Pressed Tons.	Loose Tons.	Total Tons.	Pressed Tons.	Loose Tons.	Total Tons.
Madras ...	3,661	327	3,988	5,852	689	6,541
Southern Mahratta Railway ...	225	12	237	...	80	80
Adoni ...	...	376	376	68	293	361
Malabar ...	790	186	976	394	337	731
Guntakal ...	13	138	151	236	722	958
Cuddapah ...	...	3	3	...	794	794
Bellary District ...	...	319	319	...	425	425
Great Indian Peninsula Railway ..	...	4	4	480	18	498
Tirupur ...	...	13	13	...	60	60
Coimbatore ...	...	222	222	23	434	457
Mysore Dominions ...	164	23	187	23	1	24
Minor stations ...	12	79	91	44	63	107
Total...	4,865	1,702	6,567	7,120	3,919	11,039

26. The condition in which the Cotton was carried is shown in the following table:—

Condition.	June 1892.		June 1893.	
	Tons.	Rs.	Tons.	Rs.
Loose ...	1,702	19,995	3,919	33,657
Full pressed ...	4,865	73,375	7,120	99,277
Total...	6,567	93,370	11,039	1,32,934

27. The quantity of Cotton brought into Madras during the two half-years under comparison was as follows:—

Districts.	1892.	1893.
	Tons.	Tons.
North-West Line ...	2,577	4,633
Southern Mahratta Railway ...	574	1,431
Great Indian Peninsula Railway ...	93	18
Coimbatore and Salem ...	717	441
Bangalore Branch ...	27	18
Total ...	3,988	6,541

28. Tonnage of Cotton delivered at Madras by Railway and the tonnage exported therefrom during the last and corresponding half-years.

Period.	Delivered by Railway at Madras.	Exported at Madras.
	Tons.	Tons.
Half-year ending June 1892	3,988	1,485
Do. June 1893	6,541	4,135

29. The following figures show the Cotton traffic during the June half of the last five years:—

Period.	Pressed.	Loose.	Total.	Receipts.
	Tons.	Tons.	Tons.	Rs.
June 1889	10,648	2,986	13,634	1,87,003
Do. 1890	8,835	3,401	12,236	1,51,116
Do. 1891	6,403	3,789	10,192	1,29,669
Do. 1892	4,865	1,702	6,567	93,370
Do. 1893	7,120	3,919	11,039	1,32,934

30. The following figures show the Groundnut Traffic for the last seven half-years.

Period.	Total weight.	Total receipts.
	Tons.	Rs.
Half-year ending 30th June 1890 ...	9,385	24,888
Do. 31st December 1890 ...	12,542	25,518
Do. 30th June 1891 ...	16,302	25,156
Do. 31st December 1891 ...	4,595	10,713
Do. 30th June 1892 ...	8,758	18,414
Do. 31st December 1892 ...	3,455	7,139
Do. 30th June 1893 ...	10,218	29,674

31. The tonnage of Coffee carried over the whole system and from Bangalore to Madras, respectively, during the June half-years of the last five years has been as follows.

Half-years.	Over the whole line.	From Bangalore to Madras.			
		Messrs. Binny and Co.	Other merchants.	Total.	
	Tons.	Rs.	Tons.	Tons.	Tons.
June 1889	4,342	39,371	660	54	714
Do. 1890	4,780	42,820	821	24	845
Do. 1891	3,492	32,199	654	19	673
Do. 1892	5,728	53,807	1,541	24	1,565
Do. 1893	5,530	51,457	894	37	931

32. The Coffee was contributed by and received at the following stations:—

Stations.	Half-year ending June 1892.		Half-year ending June 1893.	
	Sent from	Received at	Sent from	Received at
	Tons.	Tons.	Tons.	Tons.
Calicut	...	1,914	...	2,078
Madras	1	2,318	6	1,610
Coimbatore	980	1,450	1,484	1,804
Mettupalaiyam	1,429	...	1,592	...
Bangalore	1,567	...	931	25
Salem	174	...	465	...
Mysore	714	...	306	...
Palghant	757	...	352	...
South Indian Railway	100	...	364	...
Minor Stations	6	16	30	13
Total...	5,728	5,728	5,530	5,530

33. The total quantity of Salt carried over the whole system was 27,246 tons yielding a revenue of Rs. 1,47,290 against 30,213 tons with a revenue of Rs. 1,68,178 or a decrease of 2,967 tons in weight, and Rs. 20,888 in money. The sum earned per ton hauled was Rs. 5.4 against Rs. 5.5. The exports from Madras amounted to 16,442 tons or 60 per cent. of the salt carried.

34. The following statement shows in tons the Salt carried from stations other than Madras, and the districts to which it was sent.

Stations.	Half-year ending June 1892.		Half-year ending June 1893.	
	Sent from	Received in	Sent from	Received in
	Tons.	Tons.	Tons.	Tons.
Tirur	1,465	...	1,463	...
Feroke	711	...	281	...
Calicut	9,474	...	8,828	...
Nellore	11	...	1	...
Vencatachellum	470	...	10	...
Salem	379	...	213	...
Erode	97	...	22	...
Kallai	382	...	93	...
North Arcot District	...	40	...	...
Salem District... ..	...	3,932	...	3,672
Coimbatore District	...	3,309	...	3,061
Malabar do.	...	3,317	...	3,668
Cuddapah do.	...	349	...	11
Bellary do.	...	43	...	...
Mysore Dominions	...	1,958	...	504
Minor Stations... ..	18	59	...	...
Total...	13,007	13,007	10,916	10,916

35. Tonnage of Salt carried out of Madras to the various districts during the half-years ending 30th June 1892 and 1893.

Districts.	1892.	1893.
	Tons.	Tons.
Between Madras, Arkonam and Conjeveram	863	899
Cuddapah	805	831
Other Stations on North-West Line	4,331	3,910
Arcot and Katpadi	...	...
Between Gudiyatam and Vaniyambadi	5,136	4,711
Bangalore	3,006	2,769
Mysore	1,531	1,610
Other Stations on Bangalore Branch	100	460
Salem	40	10
Other Stations in Salem District... ..	630	739
Erode, Tirupur and Coimbatore	...	...
Malabar District	140	60
Southern Mahratta Railway	1,481	1,455
South Indian Railway	...	...
Bellary-Kistna State Railway	...	...
Total	16,927	16,442

36. The following table shows the Salt traffic carried out of Madras in each year for the five years ending 30th June 1893.

Districts.	1889.	1890.	1891.	1892.	1893.
	Tons.	Tons.	Tons.	Tons.	Tons.
Between Madras, Arkonam and Conjeveram.	1,956	1,907	1,726	1,712	1,768
Cuddapah ...	1,182	1,841	405	1,470	1,747
Other Stations on North-West Line ...	6,421	6,496	2,765	6,886	8,105
Arcot and Katpadi ...	7,871	7,320	6,777	6,059	5,592
Gudiyatam and Vaniyambadi ...	3,227	3,871	3,670	3,525	2,985
Bangalore ...	4,272	4,708	2,798	1,677	2,406
Mysore State Railway ...	2,618	1,920	1,249	300	239
Other Stations on Bangalore Branch ...	1,859	1,783	1,423	1,378	1,619
Salem ...	809	363	163	160	859
Other Stations on Salem District ...	4,011	3,733	3,107	3,195	3,928
Erode, Tirupur and Coimbatore ...	5,168	5,263	3,888	4,860	6,557
Malabar ...	...	20	...	40	...
Southern Mahratta Railway ...	2,140	2,014	1,200	859	255
South Indian Railway ...	...	...	9	799	956
Bollary-Kistna State Railway ...	177	107	229	696	1,171
Total...	41,711	41,351	29,409	33,616	38,187

37. A brief explanation of the variations in the Commodities referred to in para. 20 is given below.

	From	To
Coal & Coke—Increase ...	Larger despatches of Coal { Madras	... Kolar Road.
Cotton, Manufactured—Increase	Larger despatches of Twist and Yarn, Indian { Madras	... { North Arcot Dist.
	Bangalore City	... { Bellary District.
	Cuddapah	... Madras.
	Larger despatches of Piece Goods, Indian, in Bales. { Salem District.	... { M. S. Ry.
Cotton, Manufactured—Increase	S. I. Ry.	... { Bangalore Branch.
	Adoni	... { Malabar District.
	Do. do. of Piece Goods, Indian, in Boxes. { Madras	... { Malabar District.
	Cuddapah District..	... { C. N. S. Ry.
Grain—Increase	Larger despatches of Wheat. { S. M. Ry.	... { Madras.
	Arcot	... { Bellary District.
	Katpadi	... { Madras.
	Gudiyatam	... { Coimbatore District.
	Larger despatches of Rice. { Tirupatore	... { Malabar District.
	M. S. Ry.	... { Kolar Road.
	S. M. Ry.	... { Bangalore.
	Jolarpet	... { Salem District.
	Calicut	... { Mangalam.
	Bangalore City	... { Coimbatore District.
	Nandalore	... { Do.
		... { Bellary District.

	From	To
Grain—Increase (cont'd.)	Larger despatches of Raggi { Kolar Road	... { Salem District.
	Malur	... { Coimbatore District.
	Bangalore City	... { Madras.
	M. S. Ry.	... { Coimbatore District.
	S. M. Ry.	... { Do.
	Madras	... { S. I. Ry.
	Salem	... { Madras.
	S. I. Ry.	... { Salem District.
	Bangalore City	... { Coimbatore District.
	S. M. Ry.	... { North Arcot Dist.
Hides & Skins—Increase.	Larger despatches of other Grains { Kolar Road	... { Coimbatore District.
	Calicut	... { Salem District.
	Rajampet	... { Mettupalaiyam.
	Malur	... { Bangalore Branch.
	Cuddapah	... { Coimbatore District.
	M. S. Ry.	... { S. I. Ry.
	G. I. P. Railway	... { Madras.
	Madras	... { North Arcot Dist.
	S. M. Railway	... { Madras.
	Ambur	... { Do.
Jute—Increase	Larger despatches of Jute Raw { S. M. Railway	... { Bellary District.
	Malabar District	... { Parli.
	Madras	... { Bangalore Branch.
	Larger despatches of Gunny Bags and cloth. { Coimbatore District.	... { Arcot.
	S. I. Ry.	... { Coimbatore.
	Calicut	... { Kolar Road.
		... { S. M. Ry.
		... { M. S. Ry.
		... { Bangalore Branch.
		... { Coimbatore District.
Metals—Increase	Larger despatches of Copper Unwrought { Madras	... { Coimbatore.
	Iron	... { Madras.
	Erode	... { Bangalore Branch.
	Larger despatches of Other Metals { Madras	... { Coimbatore District.
	Malabar District	... { Malabar District.
		... { Coimbatore.
		... { Palghat.
		... { North Arcot Dist.
		... { Coimbatore District.
		... { Bangalore Branch.
Oil Seeds—Increase	Larger despatches of Linseed { Adoni	... { S. M. Ry.
	Yerraguntla.	... { Do.
	Salem	... { Madras.
	S. M. Ry.	... { S. I. Ry.
	M. Railway	... { Salem District.
	Gooty	... { Madras.
	Adoni	... { Madras.
	Tirupatore	... { Madras.
		... { Madras.
		... { Madras.

38. The inwards traffic at Kolar Road and Kamasamudrum (the principal stations for the gold fields) for the half-years ended June 1892 and 1893 is summarised in the following table:—

KOLAR ROAD.

Description of goods.	1892.		1893.	
	Total traffic.		Total traffic.	
	Tons.	Rs.	Tons.	Rs.
Coal, Coke and Patent Fuel ...	21,527	1,03,468	21,574	1,21,358
Timber	2,711	20,884	2,654	20,230
Firewood	1,019	961	5,240	5,599
Machinery	1,010	14,473	987	11,060
Not classified	9,054	61,347	17,403	83,013
Total ...	35,321	2,01,133	50,858	2,41,290

KAMASAMUDRAM.

Description of goods.	1892.		1893.	
	Total traffic.		Total traffic.	
	Tons.	Rs.	Tons.	Rs.
Coal, Coke and Patent Fuel ...	...	...	1,938	8,894
Timber	3	10	...	...
Firewood	4,213	2,528	4,359	3,367
Machinery	4	61	...	...
Not classified	398	1,289	1,269	4,271
Total ...	4,618	3,888	7,566	16,532

39. The interchange of the principal Commodities with Foreign Railways during the two half-years under review, is shown below:—

Commodities.	1892.		1893.	
	Tons.	Rs.	Tons.	Rs.
Cotton, raw... ..	1,150	12,504	2,706	27,973
Do. manufactured	2,903	39,382	3,127	42,544
Dyes and Tans	4,776	58,783	4,888	57,185
Grain	43,662	2,59,861	72,183	4,14,005
Hides and Skins	6,735	1,16,319	7,151	1,19,288
Metals	1,628	21,785	2,200	22,941
Oils	1,420	12,206	2,084	12,448
Seeds	12,826	61,234	12,620	61,862
Provisions	14,700	1,03,728	15,406	1,18,910
Railway Plant and Rolling Stock...	5	210	8	23
Salt	1,976	11,812	716	6,272
Sugar	5,362	43,465	7,783	61,803
Wood	4,644	26,137	4,705	28,414
Coffee	834	9,666	834	11,131
Government Stores	685	26,372	597	23,310
All other articles of merchandise...	5,627	54,668	6,378	68,003
Tobacco	1,697	20,316	1,833	18,737
Liquors	1,890	18,109	1,208	13,078

40. *Abstract of Commodities.*—A detailed statement of the principal commodities carried during the half-years under review will be found printed on pages 17, 18 and 19 of the Capital and Revenue accounts prepared by the Chief Auditor for the half-year ended June 1893.

41. *Working Expenses.*—As explained in detail in statement No. 20 of the Appendix the working expenses of the Traffic Department show an increase of Rs. 13,562 over those for the corresponding half-year of 1892.

The reduction under General Superintendence is due to lower rates of pay drawn by the Traffic Manager, and Deputy Traffic Manager and to some slight savings in office establishment.

The increase under station staff is due to the greater cost of labour for transshipment of goods at Junction stations, on account of the increased tonnage handled, and to some necessary additions to the subordinate staff. The increase under train staff is due to the additional train mileage worked.

Expenditure under the heads of "Fire, Lights and General Stores," "Printing, Stationery and Tickets" and "Miscellaneous" has risen with the increased traffic carried.

As stated in para. 48 of the report for the last half-year, expenses were during that period, when traffic was light, reduced in every possible way. The stock of wagon covers and ropes in particular was allowed to run down and with the present rise in traffic it has become necessary to greatly increase the staff and the outturn of work in the tarpaulin sheds. Some considerable increase of expenditure may therefore be looked for under this head during the current half-year and for some time to come.

The stock of roof lamps has also, in view to the expected introduction of oil gas lighting for the carriages, been allowed to run down in condition and number to the lowest working minimum and unless the new system can be introduced at an early date some expenditure under this head will be unavoidable.

42. *Appendices.*

The undermentioned statements are enclosed:—

1. Coaching Traffic receipts in each month.
2. Goods do. do.
3. Comparison of Coaching receipts for 1892 and 1893.
4. Do. Goods do. do.
5. Average receipts per mile open and per mile run during 1892 and 1893.
6. Expenditure table of 1892 and 1893.
7. Percentage of Working Expenses for 1892 and 1893.
8. Do. Revenue do. do.
9. Passenger Traffic exclusive of return fares and soldiers for 1893.
10. Average of Passenger traffic exclusive of return fares do. do.
11. Passenger Traffic inclusive of return fares but exclusive of soldiers for 1893.
12. Average of Passenger traffic do. do.
13. Return fare traffic for 1893.
14. Comparison of Passenger traffic inclusive of return fares but exclusive of soldiers for 1892 and 1893.
15. Comparison of Passenger Traffic exclusive of return fares and soldiers for 1892 and 1893.
16. Comparison of Return fare Traffic for 1892 and 1893.
17. Parcels, Treasure and Passengers Luggage for 1892 and 1893.
18. Gross earnings and Tonnage of Goods Traffic.
19. Comparison of Goods Traffic, 1892 and 1893.
20. Comparative statement of Traffic expenses for 1892 and 1893.
21. Table of Coaching Traffic in and out at stations for 1892 and 1893.
22. Table of Goods do. do. do. do.

I have the honor to be,

Sir,

Your obedient Servant,

(Signed) D. ROSS JOHNSON,

for Traffic Manager.

APPENDIX

TO

TRAFFIC MANAGER'S HALF-YEARLY REPORT FOR 30th JUNE 1893.

1. Coaching traffic receipts in each month for the half-year ending 30th June 1893.

Months.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of post office vehicles.	Total.
	Passengers and season tickets.	Troops and police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
January ...	2,97,393	10,641	10,732	3,732	4,017	233	22,406	290	2,057	3,749	1,976	3,57,256
February ...	2,70,714	10,671	8,190	3,704	5,802	270	17,750	315	902	1,354	1,789	3,21,761
March ...	2,88,887	11,674	9,280	1,586	7,334	588	21,416	328	1,927	1,618	1,976	3,46,614
April ...	2,68,545	15,721	11,623	3,762	11,222	622	19,489	280	...	228	1,613	3,33,405
May ...	2,92,938	7,297	10,665	907	6,400	328	17,165	285	1,754	295	1,919	3,40,283
June ...	2,87,616	9,801	10,444	1,298	4,455	500	16,662	335	...	10	1,922	3,33,943
Total ..	17,06,093	65,805	61,231	14,989	39,260	2,541	1,15,188	1,833	6,610	7,284	11,525	20,32,392

2. Goods traffic receipts in each month for the half-year ending 30th June 1893.

Months.	Merchandise and military stores and coal for the public.	Railway materials for construction.	Revenue stores.	Live Stock.		Rents and demurrage.	Miscellaneous.	Total.
				Ordinary.	Military.			
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
January ...	4,67,624	583	8,771	1,209	458	892	217	4,99,754
February ...	5,06,649	34	7,374	3,253	2,354	833	110	5,20,637
March ...	5,55,073	634	8,106	2,042	828	789	193	5,67,731
April ...	4,99,897	1,002	9,505	1,656	252	736	436	5,13,484
May ...	5,08,163	1,297	9,442	1,647	509	804	478	5,22,346
June ...	5,19,069	1,090	11,967	871	...	1,036	380	5,31,113
Total...	30,76,457	4,700	53,165	10,678	4,101	5,090	1,844	31,58,365

3. Comparison of the coaching traffic for the half-years ending June and December 1892 and June 1893.

Half-years.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of post office vehicles.	Total.
	Passengers and season tickets.	Troops and police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
June 1892...	14,99,523	88,694	59,773	23,105	40,702	5,000	1,01,956	1,979	5,302	3,256	11,636	18,40,920
December 1892...	15,61,415	82,529	59,600	21,927	35,884	5,681	1,34,095	1,824	3,363	1,492	11,996	19,13,904
June 1893...	17,06,093	65,805	61,231	14,989	39,260	2,541	1,15,188	1,833	6,610	7,284	11,525	20,32,392

4. *Comparison of the goods traffic for the half-years ending June and December 1892 and June 1893.*

Half-years.	Merchan- dise and military stores and coal for the public	Railway material for construc- tion.	Revenue stores.	Live Stock.				Rents and de- murrage.	Miscel- laneous.	Total.
				Ordinary.		Military.				
				Horses.	Other live stock.	Horses.	Other live stock.			
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
June 1892...	26,87,605	26,879	68,211	2,101	10,226	7,470	4,283	4,572	2,301	28,13,618
December 1892...	27,81,280	17,467	56,822	2,983	4,875	6,789	...	4,529	2,314	28,77,064
June 1893 ..	30,76,487	4,700	55,165	4,030	6,643	4,101	...	5,090	1,841	31,58,365

5. *Average receipt per "mile open" and per "mile run" for the same periods.*

Period.										Per mile open.	Per mile run.
										RS.	RS.
Half-year ending June 1892	...	...	...	...	...	...	...	...	...	5,618.03	3.81
Do. do. December 1892	...	...	...	...	...	...	...	...	...	5,809.00	3.83
Do. do. June 1893	...	...	...	...	...	...	...	...	...	6,293.70	4.06

6. *Table of expenditure for the half-years ending June and December 1892 and June 1893.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
Half-year ending June 1892...	RS. 6,72,733	RS. 9,36,122	RS. 3,03,882	RS. 4,28,521	RS. 2,70,909	RS. 60,885	RS. 26,73,052
Do. do. December 1892...	7,80,015	9,25,113	2,12,870	4,15,223	2,69,246	56,987	26,59,484
Do. do. June 1893...	4,07,981	10,19,866	2,44,413	4,42,083	2,86,717	44,615	24,15,705

7. *Percentage of working expenses for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
Half-year ending June 1892...	RS. 25.17	RS. 35.02	RS. 11.37	RS. 16.03	RS. 10.13	RS. 2.24	100.00
Do. do. December 1892...	29.34	31.79	8.00	15.61	10.12	2.14	100.00
Do. do. June 1893...	16.68	41.70	9.99	18.03	11.72	1.83	100.00

8. *Percentage of revenue for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Profits.	Total.
Half-year ending June 1892...	RS. 11.18	RS. 19.73	RS. 6.10	RS. 9.03	RS. 5.71	RS. 1.29	RS. 43.67	RS. 100.00
Do. do. December 1892..	15.98	18.96	4.36	8.51	5.52	1.17	45.50	100.00
Do. do. June 1893...	7.72	19.29	4.62	8.36	5.42	0.85	53.74	100.00

9. *Passenger traffic, exclusive of return fares and soldiers, in each month for the half-year ending June 1893.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
January ...	1,225	12,001	4,343	16,159	773,912	2,65,411	779,481	2,91,171
February ...	1,164	11,163	3,105	11,008	761,080	2,44,551	765,650	2,66,727
March ...	1,286	14,852	3,969	11,189	831,009	2,56,934	839,265	2,86,275
April ...	1,231	11,900	3,767	13,270	766,397	2,37,887	771,449	2,66,057
May ...	1,158	13,534	4,337	16,360	827,837	2,61,245	833,332	2,91,139
June ...	1,039	10,758	4,169	15,006	852,674	2,59,445	857,882	2,85,209
Total ...	7,157	77,813	23,992	86,292	4,815,911	15,25,473	4,847,060	16,89,578

10. *Average of passenger traffic, exclusive of return fares and soldiers for the half-year ending June 1893.*

	Average Miles open.	First class.	Second class.	Third class.	Total.
Average receipt per mile open ...	840	RS. A. P. 92 10 2	RS. A. P. 102 11 8	RS. A. P. 1,816 0 7	RS. A. P. 2,011 6 5
Average percentage of numbers ...	...	0.15	0.49	99.36	100.00
Average mileage of passengers ...	...	203	114	36	...
Average percentage of receipts ...	...	4.60	5.11	90.29	100.00

11. *Passenger traffic in each month, inclusive of return fares, but exclusive of soldiers for the half-year ending June 1893.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
January ...	1,518	12,901	4,989	16,436	801,894	2,68,056	808,401	2,97,393
February ...	1,198	11,483	3,529	11,168	803,217	2,48,063	808,245	2,70,711
March ...	1,453	15,147	4,636	14,736	876,891	2,59,005	882,980	2,98,888
April ...	1,912	15,610	4,310	13,194	799,523	2,39,441	805,775	2,68,545
May ...	1,191	13,805	5,208	16,885	837,771	2,62,248	844,170	2,92,938
June ...	1,502	11,516	5,524	15,614	879,390	2,60,485	886,406	2,87,615
Total ...	8,775	80,462	23,527	88,333	4,698,677	15,37,298	4,703,979	17,06,093

*At the request of the Director-General of Railways an alteration has been made in the manner of showing season tickets with effect from August 1892. Each ticket is now calculated as 40 passengers per mensem.

12. Average of passenger traffic, inclusive of return fares and soldiers for the half-year ending June 1893.

	Miles open.	First class.	Second class.	Third class.	Total.
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Average receipt per mile open ...	840	95 12 7	105 2 6	1,830 1 10	2,031 0 11
Average percentage of numbers ...	...	0.17	0.57	99.26	100.00
Average mileage of passengers ...	...	175	119	36	...
Average percentage of receipts ...	...	4.72	5.18	90.10	100.00

13. Return fare traffic for the half-year ending 30th June 1893.

Months.	Periodical tickets.								Return tickets.						Total.	
	First class.		Second class.		Third class.		Total.		First class.		Second class.		Third class.			
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.		
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.		
January ...	280	157	634	146	15,383	207	16,297	510	12½	113	12	131	12,599	2,138	12,623½	2,712
February ...	17	26	417	90	25,286	277	25,720	393	17½	289	6½	70	16,851	3,235	16,875½	3,594
March ...	160	92	663	213	35,257	431	36,080	736	7½	203	3½	35	7,624½	1,639	7,635½	1,877
April ...	623	616	566	148	26,588	308	27,777	1,072	4½	94	7	77	6,537½	1,215	6,549½	1,416
May ...	23	34	851	294	5,212	117	6,086	445	10	238	20	230	4,722	886	4,752	1,354
June ...	457	596	1,319	532	22,194	183	24,000	1,311	6	162	6	76	4,512	858	4,524	1,096
Total...	*1,569	1,321	4,480	1,423	*129,920	1,523	*135,960	4,467	58	1,129	55	619	52,846	10,301	52,959	12,040

14. Comparison of the passenger traffic inclusive of return fares, but exclusive of soldiers for the half-years ending June and December 1892 and June 1893.

Half-years.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending June 1892	6,815 1/2	72,187	20,210	73,882	4,259,953 1/2	13,53,454	4,287,009	14,99,523
Do. do. December 1892	8,592 1/2	73,067	26,542 1/2	79,722	4,487,133	14,11,626	4,522,268	15,64,415
Do. do. June 1893	8,775 1/2	80,462	28,527	88,333	4,998,677	15,37,298	5,035,979 1/2	17,06,093

15. Comparison of the passenger traffic, exclusive of return fares and soldiers, for the half-years ending June and December 1892 and June 1893.

Period.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
June 1892 ...	6,779 1/2	69,718	20,098	72,219	4,210,458 1/2	13,42,769	4,237,336	14,84,736
December 1892 ...	7,170 1/2	69,686	22,197 1/2	76,688	4,275,802	14,02,312	4,305,170	15,48,686
June 1893 ...	7,157 1/2	77,813	23,902	86,202	4,815,911	15,25,473	4,847,060 1/2	16,89,578

*At the request of the Director-General of Railways an alteration has been made in the manner of showing season tickets with effect from August 1892. Each ticket is now calculated as 40 passengers per mensem.

16. Comparison of the return fare traffic for the half-years ending June and December 1892 and June 1893.

Period.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending June 1892. } Trivellore ...	66	2,469	112	1,633	30,212	5,706	30,212	5,706
Half-year ending June 1892. } Other excursions ...	...	...	...	...	49,495	10,684	49,673	14,786
Half-year ending June 1892. } Trivellore ...	...	...	...	...	8,814	1,659	8,814	1,659
Half-year ending June 1892. } Other excursions ...	1,422	3,383	4315	3,035	202,517	7,653	208,284	14,17
Half-year ending June 1893. } Trivellore ...	1,618	2,650	4,535	2,042	32,524	6,105	32,524	6,105
Half-year ending June 1893. } Other excursions ...	...	...	...	...	182,766	11,824	188,919	16,516

17. Parcels Treasure and passengers' luggage for the half-years ending June and December 1892 and June 1893.

Period.				Parcels.			Luggage.				Total.
				No.	Rs.	Revenue parcels.	Ordinary.		Military.		
							Public.	Treasure	By ordinary trams.	By troop trains	
						Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
June	1892...	...	..	112,417	1,01,956	1,979	35,667	23,905	6,844	16,261	82,877
December	1892...	...	..	134,441	1,34,045	1,924	31,597	19,003	8,040	13,847	72,547
June	1893...	...	..	125,638	1,15,188	1,833	49,241	26,951	9,534	5,457	91,211

18. Gross earnings and tonnage of goods, exclusive of Railway materials and Revenue stores, for the half-year ending 30th June 1893.

Months.								Tons.	Rupees.
January ...	...	...	...	...	...	...	...	74,473	4,87,624
February ...	...	...	...	...	...	...	...	74,114	5,06,649
March ...	...	...	...	...	...	...	...	80,675	5,55,078
April ...	...	...	...	...	...	...	...	73,335	4,99,898
May ...	...	...	...	...	...	...	...	74,891	5,08,169
June ...	...	...	...	...	...	...	...	73,302	5,19,069
Total	...	...	...	...	...	...	...	450,720	30,76,487

19. Comparison of the goods traffic, exclusive of Railway materials and Revenue stores, for the half-years ending June and December 1892 and June 1893.

Period.								Tons.	Rupees.
Half-year ending June 1892...	...	...	...	...	...	...	...	380,362	26,87,605
Do. do. December 1892 ...	...	...	...	...	...	...	...	419,044	27,81,280
Do. do. June 1893 ..	...	...	...	...	...	...	...	450,790	30,76,487

20. Comparative statement of the traffic expenses, for the half-years ending June and December 1892 and June 1893.

Period.	Traffic Manager and Assistants.	Office establishment.	Travelling allowances.	Contingencies.	Station Masters, Clerks and Porters.	Guards and Assistant Guards.	Overtime allowance.	Fire, lights, water and general stores.	Wagon covers & ropes.	Office and station fittings and furniture.	Clothing of Guards and Porters.	Printing, stationery and tickets.	Miscellaneous.	Traffic expenses at joint station.	Loss on exchange.	Carriage of revenue stores.	Charges for delivery and collection of goods.	Total.
1892	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
June 1892	36,498	22,699	3,498	6,641	1,87,281	46,570	676	41,105	4,978	8,748	4,218	33,577	7,889	...	15,607	2,288	124	4,28,521
December 1892	30,263	23,181	3,105	6,813	1,83,679	46,030	649	42,764	2,167	2,643	5,588	37,953	2,139	5,150	15,264	1,832	1003	4,15,223
June 1893	34,214	22,489	3,710	7,448	1,93,940	47,183	332	45,620	4,374	1,824	5,507	42,223	4,161	6,570	19,841	1,316	1281	4,42,083

*At the request of the Director-General of Railways an alteration has been made in the manner of shewing season tickets with effect from August, 1892. Each ticket is now calculated as 40 passengers per mensem.

22. The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending 30th June 1892 and 1893, together with the gross traffic receipts.

STATIONS.	TONNAGE OF GOODS AND RAILWAY MATERIALS.				GOODS RECEIPTS.				GROSS RECEIPTS, COACHING & GOODS, INWARDS AND OUTWARDS.	
	1892.		1893.		1892.		1893.		1892.	1893.
	Inwards.	Outwards.	Total.	Tons.	Inwards.	Outwards.	Total.	Tons.	Rs.	Rs.
Madras	69,233	50,797	120,030	91,704	13	104	122	6,069	13,565	9,075
Salt Cotours	3,837	34,422	38,259	6,687	...	47,681	139,364	6,13,941	11,29,732	12,48,825
Rayapuram	...	...	...	...	...	39,119	45,806	2,284	1,90,278	2,10,904
Washermenpet	472	81	553	78	...	...	163	1,680	596	601
Perambur	...	...	...	...	...	85	...	...	...	...
Connur	66	4,330	4,396	175	...	...	...	14	1,849	3
Ambatur	1,153	3,211	4,364	416	7,015	...	...	97	1,835	5,448
Avadi	140	210	350	160	4,196	...	...	213	6,105	5,937
Tinamar	187	193	380	91	306	...	...	203	416	1,495
Sevayapet Road	945	2,152	3,097	1,931	112	...	...	358	620	209
Trivellore	320	935	1,255	308	203	658	2,589	3,985	7,737	7,535
Kadambatur	13	228	241	31	203	728	1,036	959	6,302	5,802
Manar	170	1,034	1,204	161	160	...	...	55	687	583
Chinnamapet	6	52	58	7	888	...	...	613	2,529	1,993
Mosur	1,012	1,834	2,846	1,808	1,461	...	...	19	142	74
Arkonam	1,717	2,701	4,418	2,078	3,306	...	...	6,573	17,615	13,586
Tiruttani	...	...	...	...	...	...	...	7,477	13,296	15,587
Poppadi	1,367	4,337	5,704	1,363	4,007	...	...	...	...	...
Nagari	8	38	46	10	17	...	...	...	...	...
Vepagunta	883	1,939	2,822	1,207	1,926	...	...	3,464	9,913	10,940
Puttur	166	972	1,138	172	1,142	...	...	1,632	4,497	5,358
Padi	1,876	1,163	3,039	1,633	1,816	...	...	9,629	15,462	16,170
Renigunta	16	895	911	15	1,268	...	...	60	2,486	2,697
Mamandur	19	1,072	1,091	25	1,226	...	...	96	4,277	5,423
Peddapad	499	1,554	2,053	169	713	...	...	2,531	10,924	5,672
Kolar	61	723	784	245	1,313	...	...	384	3,431	9,135
Urapad	109	311	420	55	336	...	...	524	2,696	2,777
Reddipalle	1,607	1,663	3,270	1,539	2,290	...	...	8,521	19,667	24,784
Rajampet	108	124	232	306	399	...	...	388	1,379	2,892
Nandalur	...	...	...	...	...	...	...	...	...	...
Vontimitta	131	211	342	103	534	...	...	760	1,914	4,917
Siddhavattam	8,815	4,618	13,433	6,840	6,908	...	...	54,930	83,338	48,191
Chudalapa	196	295	491	605	387	...	...	1,272	3,155	2,720
Krishnapuram	51	40	91	234	44	...	...	593	1,46	1,177
Gangavayalli	2,879	289	3,168	1,189	311	...	...	12,804	14,110	1,603
Kanalapuram	13	3	16	50	1	...	...	39	19	21
Yerragudi Padu	2,166	4,851	7,020	3,557	4,391	...	...	15,191	31,319	32,517
Yerraguntla	...	...	...	...	...	...	...	...	...	...
Kalanala*	1,134	552	1,686	1,790	570	...	...	7,761	4,514	12,278
Maddur	9	33	42	82	56	...	...	66	180	216
Mangapatnam	318	364	682	716	372	...	...	2,193	2,226	4,419
Kondapuram	73	23	96	196	105	...	...	433	149	582
Vanganur	3,084	2,171	5,255	3,216	3,992	...	...	21,991	21,017	43,038
Tadipatri	43	178	221	77	142	...	...	312	510	829
Penner	374	217	591	321	343	...	...	2,069	1,275	3,344
Ravalcheru	6	57	63	15	14	...	...	60	71	111
Jakkulacheruvu	2,074	915	2,989	1,124	1,118	...	...	13,361	10,756	24,117
Gooty	1,382	351	1,733	856	216	...	...	5,650	3,987	9,637
Patakottacheru	1,410	86	1,496	762	201	...	...	8,446	968	9,414
Tinnamancherla	543	48	591	127	510	...	...	1,992	248	2,240
Guntakal Junction	15	7	22	22	11	...	...	312	43	30
Nancherla	168	131	299	38	274	...	...	1,667	1,570	3,237
Malagavalli	10,419	3,211	13,630	6,322	6,168	...	...	42,605	28,477	71,082
Aspari	114	5	119	32	40	...	...	218	30	57
Adoni	578	82	660	280	301	...	...	2,156	381	2,537
Kuppal	62	149	211	36	334	...	...	345	336	681
Tungabhadra	16	282	298	48	285	...	...	118	3,328	3,446
Matmari	2,917	4,212	7,129	2,953	3,073	...	...	29,856	41,662	71,518
Raichur	299	1,056	1,355	471	224	...	...	1,457	2,246	3,703
Munial	671	1,478	2,149	773	1,261	...	...	3,186	3,571	6,757
Sholinghur	...	...	...	...	...	...	...	...	...	...
Thalangai	5,864	4,059	9,923	6,462	8,722	...	...	31,081	20,496	51,577
Arcot	211	285	496	173	189	...	...	1,258	857	2,115
Tiruvallam	10,972	9,000	19,972	10,797	12,609	...	...	94,896	70,324	1,65,220
Katpadi	...	...	...	...	...	...	...	...	...	...
Latterit	186	503	689	114	785	...	...	1,161	1,601	2,765
Vinijapuram	1,099	2,387	3,486	3,920	2,807	...	...	36,995	15,334	52,329
Gudiyatam	343	145	488	325	141	...	...	3,946	974	4,920
Uli	581	949	1,530	631	861	...	...	4,023	6,668	10,691
Mailpati	1,841	1,474	3,315	2,376	1,856	...	...	9,131	31,665	42,823
Ambur	...	...	...	...	...	...	...	...	...	...
Vinamangalam	...	...	...	...	...	...	...	...	...	...

* Opened 19th February 1893.

* Opened 12th February 1893.

The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending, &c.—continued.

STATIONS.	TONNAGE OF GOODS AND RAILWAY MATERIALS.						GOODS RECEIPTS.						GROSS RECEIPTS, COACHING & GOODS, INWARDS AND OUTWARDS.	
	1892.			1893.			1892.			1893.			1892.	1893.
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.		
Vaniyambadi	5,104	4,937	10,041	5,661	4,540	10,201	33,043	27,960	61,003	31,953	24,373	56,326	Rs. 88,613	Rs. 88,690
Ketandapatti	7	211	218	11	81	92	48	1,085	1,133	2,218	59	517	5,512	5,512
Jalarpet	310	714	1,024	545	746	1,291	1,586	2,893	4,479	2,086	3,135	5,221	56,811	66,554
Patchur	86	711	797	431	1,158	1,609	315	1,733	2,048	1,292	2,203	3,495	6,594	9,274
Mulanur	11	132	143	19	3,148	3,167	57	235	292	66	2,965	3,031	1,216	4,579
Kuppam	868	6,134	7,002	732	4,347	5,079	4,513	7,630	12,143	4,350	7,884	12,234	26,071	28,662
Gudupalli	3	...	3	18	405	423	82	12	94	26	293	319	1,022	2,209
Kausamudram	4,620	223	4,843	7,566	192	7,758	3,981	1,030	5,011	16,609	683	17,292	24,171	41,068
Kolar Road	35,321	3,142	38,463	50,858	11,731	62,589	2,012,48	19,747	2,20,995	2,44,536	65,698	3,10,234	2,82,941	3,98,063
Tyval	72	321	393	56	714	770	496	936	1,432	346	2,118	2,464	5,928	7,620
Malur	837	1,473	2,310	584	3,555	4,139	5,754	6,485	12,239	3,727	19,272	22,999	33,574	43,917
Devankundi	90	341	431	130	1,232	1,362	410	650	1,060	569	2,422	2,991	5,473	8,011
Whitefield	200	358	558	157	1,232	1,389	1,518	1,979	3,497	1,623	9,950	11,573	12,077	21,199
Krishnarajapuram	360	27	327	217	881	1,098	2,840	218	3,053	2,885	625	3,510	7,496	8,516
Bangalore Cant.	15,920	6,385	22,305	12,890	6,873	19,763	1,48,994	80,289	2,28,983	1,25,519	73,877	1,99,396	5,00,823	4,62,807
Do. City	17,429	12,315	29,744	10,105	28,077	38,182	1,33,615	86,269	2,19,881	84,746	1,71,284	2,56,030	2,70,512	3,15,998
Tirupatur	5,763	6,813	12,606	4,567	9,488	14,055	29,540	30,723	60,263	25,873	40,649	66,522	95,510	1,06,563
Kagankarai	56	84	140	7	91	98	36	264	300	43	496	539	2,651	3,613
Samalpati	1,130	183	1,313	631	407	1,038	2,186	1,177	3,363	1,454	2,473	3,927	9,826	11,053
Kallavi	60	104	164	23	353	376	212	561	773	90	1,633	1,723	3,133	4,837
Morappur	1,193	888	2,081	1,074	1,114	2,188	8,224	4,801	13,025	11,459	5,888	17,377	25,812	30,949
Baddireddipatti	173	161	337	42	218	260	1,011	640	1,651	133	992	1,125	4,819	4,582
Madhapuram	43	1,491	1,534	21	659	680	154	2,194	2,348	98	1,540	1,638	8,822	8,566
Kadiampatti	70	372	442	140	425	565	381	1,189	1,570	1,050	2,223	3,273	4,172	6,353
Thinnaratti	50	6	56	12	22	34	125	20	215	28	150	178	3,223	3,925
Salem	21,305	4,469	25,774	15,166	6,173	21,339	1,80,904	33,138	2,14,042	1,22,908	43,233	1,66,141	3,02,369	2,66,590
Ariyanur	8	...	8	2	2	4	51	...	51	9	15	24	1,392	1,713
McDonald's Choultry	146	225	371	120	807	927	509	1,585	2,094	500	3,900	4,400	6,171	9,167
Sankaridrug	2,983	1,310	4,293	1,737	2,998	4,735	17,530	9,962	27,492	11,922	16,997	28,919	32,876	41,310
Canvey	176	247	423	80	163	243	1,278	1,596	2,874	688	966	1,654	4,519	3,496
Frede	5,781	5,103	10,887	9,359	6,089	15,448	39,440	42,796	82,236	61,733	69,051	1,33,784	1,70,167	2,30,289

MADRAS RAILWAY,
TRAFFIC MANAGER'S OFFICE,
MADRAS, 7th October 1893.

(Signed) D. ROSS JOHNSON,
for Traffic Manager.

LAWRENCE ANGLIM TRESE.

MADRAS RAILWAY COMPANY,

CHIEF AUDITOR'S OFFICE,

Madras, 25th September, 1893.

To

THE AGENT AND MANAGER,

Madras Railway Company.

DEAR SIR,

I beg to forward herewith the usual statements of the Company's Accounts for the Half-year ending 30th June, 1893.

Capital.

2. *Statement No. V.*—The Capital expenditure for the half-year, after crediting a sum of Rupees 4,650, amounted to Rupees 2,20,946-2-2, and was incurred chiefly on additions and alterations at stations, strengthening weak and substituting stronger girders of Bridges, on extension of Block System and on Rolling Stock. The credit of Rupees 4,650 consists of Rupees 4,550 recovered from the South Indian Railway Company on account of value of a Bungalow sold to them and Rupees 100 received from the Executive Engineer, Belgaum Division being refund of value of the Rest Camp land at Gooty.

3. *Statement No. VI.*—The total Capital outlay including suspense from the commencement of operations to the end of the half-year under review, was Rupees 12,03,04,799, and the expenditure excluding suspense, Rupees 11,71,24,707, which gives an average of Rupees 1,39,564, per mile open.

REVENUE. General Results.

4. The following table shows the general results of working :—

	Half-year ending June, 1892.	Half-year ending June, 1893.	DIFFERENCE.	
	Miles.	Miles.	Miles.	Per Cent.
Mean Mileage worked ...	839.30	839.22	— .08	
Train-mileage ...	1,215,122	1,300,838	+ 55,716	+ 4.47
	No.	No.	No.	
Average number of trains over the whole line daily in both directions.	8.15	8.56	+ .41	+ 5.03
	RS.	RS.	RS.	
Gross Earnings ...	47,45,102	52,86,714	+ 5,41,612	+ 11.41
Working Expenses ...	26,73,052	24,45,705	— 2,27,347	— 8.51
Net Earnings ...	20,72,050	28,41,009	+ 7,68,959	+ 37.11
Percentage of working expenses to Gross earnings ...	56.33	46.26	— 10.07	
Percentage of Net earnings to capital outlay, including suspense ...	1.73	2.36	+ .63	

5. The Gross Earnings per mean mile worked per week averaged Rupees 242, against Rupees 217 and were realized at a cost of 46.26 per cent. against 56.33 per cent. in the corresponding half of the previous year.

6. The Net Earnings for the half-year after paying the contribution to the Provident Institution, fell short of the guaranteed interest by Rupees 70,284. During the half-year the percentage of Net Earnings on total capital outlay, including suspense, was 2.36 as compared with 1.73 in 1892.

Gross Earnings.

7. The following table shows the Gross Earnings for the two half-years.

	Half-year ending June, 1892.	Half-year ending June, 1893.	DIFFERENCE.	
			Amount.	Per Cent.
	RS.	RS.	RS.	RS.
Coaching ...	18,40,926	20,32,392	+ 1,91,466	+ 10.40
Goods ...	28,13,618	31,58,365	+ 3,44,747	+ 12.25
Electric Telegraph ...	9,275	10,012	+ 737	+ 7.95
Steam-boat ...	...	...	...	...
Sundries ...	81,252	85,945	+ 4,693	+ 5.78
Total ...	47,45,101	52,86,714	+ 5,41,613	+ 11.41

8. **Abstract H.—Coaching Traffic.** The number of passengers of the various classes carried including troops and police and season tickets, and the earnings therefrom, compare as follows :—

	FIRST CLASS.		SECOND CLASS.		THIRD CLASS.		TOTAL.	
	No.	Earnings.	No.	Earnings.	No.	Earnings.	No.	Earnings.
First half of 1892..	7,357½	78,345	27,542½	99,471	4,292,760½	14,10,401	4,327,660½	15,88,217
First half of 1893..	9,218½	85,414	33,510½	1,07,971	5,030,620½	15,78,483	5,073,349½	17,71,898
Increase ...	1,861	7,099	5,968	8,500	737,860	1,68,082	745,689	1,83,681
Decrease ...	...	...	...	...	...	...	...	...

9. The increases and decreases of the various descriptions of Passenger traffic are shown in the detail statement of Abstract II. *vide* para 100.

10. The first-class traffic shews an increase in number of 1,861 and Rs. 7,099, the greater part of the increase in numbers is due to the change in the system of recording season tickets; in the latter half year the "Estimated number of journeys made" is recorded while the corresponding figures include the number of season tickets taken out only: see Government of India, Public Works Department, letter No. 403 R., 30th August, 1892.

11. The second-class traffic shews an increase of 5,968 and Rs. 8,500; about 4,400 in the number is due to the change in system of recording season tickets as above. The increase in receipts from ordinary second-class passengers, really amounts to Rs. 14,452, as the troops and police traffic shew a decrease of Rs. 5,952.

12. The third-class traffic shews the large increase of 737,860 and Rs. 1,68,082. The proportion due to season tickets is 126,478. Troops and Police contributed less in the past half-year than in the corresponding period by Rs. 15,763. The increase is fairly general but the receipts at Madras, Arkonam, Renigunta, Kolar Road and Bangalore City alone shew an improvement of Rs. 63,000. The number of third-class passengers carried in the half-year ending June 1893 was the highest on record, the total (4,487,133) for December 1892 half-year (the previous record) being exceeded by 511,544.

13. Passengers' luggage shews an increase of Rs. 1,461 presumably due to the increased Passenger traffic.

14. The receipts from Horse, Carriage and Dog traffic are Rs. 1,443 less than in the corresponding period, and the large decrease of Rs. 2,459 is also noticeable in the Military Horse Carriage and Dog traffic.

15. Military baggage shews a decrease of Rs. 8,116. This decrease and that of the Military Horse, Carriage and Dog traffic is no doubt consequent on the less number of troops conveyed by Railway.

16. Parcels for the Public—The increase under this head is Rs. 13,232 or 12.98 per cent.

	HALF-YEAR ENDING, JUNE, 1892.		HALF-YEAR ENDING, JUNE, 1893.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	RS.	Tons.	RS.
Merchandise, general ...	356,775	25,37,268	420,537	29,04,808
Military stores ...	981	43,921	760	32,803
Railway materials for construction ...	25,952	26,879	1,483	4,700
Coal (including Locomotive Revenue) ...	31,243	1,17,546	35,367	1,49,266
Revenue stores (excluding Locomotive Coal) ...	143,546	57,081	145,170	44,774
Other goods traffic ...	...	30,953	...	22,014
	558,497	28,13,648	603,317	31,58,365
Less—Outstandings irrecoverable or not recovered ..	...	...	...	...
TOTAL ...	558,497	28,13,648	603,317	31,58,365

17. **Abstract I.—Goods Traffic.**—The following is a summary of the tonnage of goods lifted and the earnings therefrom, as compared with the corresponding period of 1892.

18. Under the head of Merchandise, General an increase of Tons 63,762 and Rs. 3,67,540 occurs: with the exception of cholum and cumbu, salt and tanning bark the increase in merchandise traffic is fairly general for the past half-year. Details of the various increases under each head of traffic are given in another place.

19. A decrease of tons 24,469 and Rs. 22,179 occurs under the head of "Railway materials for construction". This is due to the fact that more capital works were in progress in the corresponding half-year.

20. "Coal (including Loco Revenue)" The increase of tons 4,124 and Rs. 31,720 is entirely attributable to the larger consumption of coal at the Kolar Gold Mines.

21. "Revenue stores (excluding Loco coal)." Under this head there was an increase of tons 1,624 and a decrease of Rs. 12,307.

22. The following table shews some of the Principal Commodities included above under the head of Merchandize General carried during the two half-years under Comparison.

	HALF-YEAR ENDING JUNE, 1892.		HALF-YEAR ENDING JUNE, 1893.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
COFFEE	5,728	53,807	5,530	51,457
COTTON— Raw	6,567	93,370	11,039	1,32,934
PIECE GOODS— Indian	2,487	33,411	3,034	45,695
DYES AND TANS— Bark (Tanning)	8,410	91,085	7,712	80,368
GRAIN— Rice	28,927	1,52,930	30,272	1,95,083
Cholum and Cumboo	28,326	1,91,577	12,539	81,373
Gram	14,418	80,147	16,558	96,053
Raggy	16,825	1,00,180	34,481	2,19,191
Others	12,912	66,924	34,915	1,69,317
HIDES AND SKINS— Skins of Sheep, &c.	9,903	1,40,353	10,525	1,46,273
JUTE— Gunny bags and Cloth	2,633	22,386	4,071	38,126
METALS— Iron	6,260	60,357	7,989	86,578
OILS— Kerosine	3,641	36,887	3,752	34,419
OIL SEEDS— Til or Gingelly	4,717	39,962	4,638	36,823
Others	13,915	45,782	23,311	98,622
PROVISIONS— Coconuts	3,527	32,566	3,733	33,893
Betel Nuts	3,542	36,850	3,349	36,841
Vegetables	5,296	45,121	7,934	66,524
Others	21,960	1,51,985	23,333	1,73,059
SALT	30,213	1,68,178	27,246	1,47,290
SUGAR-UNDRAINED	13,255	99,503	16,481	1,15,132
TOBACCO	7,478	72,943	7,889	75,498
WOOD— Timber	16,738	98,474	19,544	1,20,695
ALL OTHER ARTICLES OF MERCHAN- DIZE— Manufactured-Others	17,065	1,75,147	20,195	1,95,454

NOTE.—The Traffic Manager's Report will give the causes of the principal variations in the receipts of the different commodities.

23. **Coffee.**—Decrease of tons 198 and Rs. 2,350.

24. **Cotton.**—*Raw.*—Increase of tons 4,472 and Rs. 39,564. Of this increase Rs. 24,000 is attributable to purely local traffic in May and June, Adoni alone showing the large increase of Rs. 20,500. The traffic booked from Raichur and Yerraguntla is slightly less than in the corresponding period, the foreign increase, Rs. 15,000 is practically all due to traffic received from the Southern Mahratta line, *via* Guntakal in May and June.

25. **Cotton.**—*Piece Goods Indian.*—Increase of tons 547 and Rs. 6,284. This is mainly confined to an improvement in the traffic from Madras Railway Company stations to other lines *via* Bangalore and Guntakal.

26. **Dyes and Tans.**—*Bark Tanning.*—Decrease tons 728 and Rs. 10,717. A large increase in this commodity was noted in the half-year ending June 92. In the current half some Rs. 5,000 less traffic was received, *via* Guntakal in January, the remaining decrease is due to local traffic, principally from Gooty and Adoni.

27. **Grain.**—*Rice.*—Increase tons 1,345 and Rs. 42,153. Local traffic in this case shews a decrease of Rs. 21,000. Rayapuram and Salt Cottars alone forwarding Rs. 60,000 less than in the corresponding period. Large increases of traffic are noticeable at Katpadi and Arcot, the former station invoicing some Rs. 41,000 more than in June 92 half-year. The traffic invoiced to and received from foreign lines shews the large increase of Rs. 63,000. The majority of this is due to received traffic, *via* Bangalore City; the inwards traffic, *via* Guntakal, however, shews an improvement and more traffic has been sent to South Indian stations *via* Erode.

28. **Grain.**—*Cholum and Cumboo.*—Decrease tons 15,787 and Rs. 1,10,204. A very large increase in the corresponding period confined generally to traffic from G. I. P. line *via* Raichur was recorded. In the past half-year the traffic *via* the junction in question, shewed a falling off of Rs. 1,30,000 and the traffic from Raichur itself was also less by about Rs. 14,000. Increased traffic in this commodity is noticed from Madras Railway Company stations to other lines *via* Bangalore City and *via* Erode.

29. **Grain.**—*Gram.*—Increase tons 2,110 and Rs. 15,906. Local traffic in this commodity shews a decrease, but a considerable increase is noticeable in the traffic received *via* Guntakal junction. The received traffic *via* Bangalore City, Erode and Raichur also shews an improvement.

30. **Grain.**—*Raggy.*—Increase tons 17,656 and Rs. 1,19,011. The local increase in this case is Rs. 32,000 leaving Rs. 87,000 to be accounted for in the foreign. The traffic despatched from Calicut station is about Rs. 20,000 less than in the corresponding period, but Bangalore City and Kolar Road shew an increased traffic amounting to some Rs. 47,000. The whole of the foreign increase appears to be confined to traffic received *via* Bangalore City and despatched to South Indian Line *via* Erode.

31. **Grain.**—*Others.*—Increase tons 22,033 and Rs. 1,02,393 40% of this increase is attributable to local traffic and 60% to foreign. The traffic invoiced at Kolar Road, Rayapuram and Cuddapah, shews an improvement of some Rs. 50,000, while Katpadi and the stations between Erode and Calicut shew a decrease of Rs. 17,000. The traffic received from other companies, *via* Bangalore City and Guntakal and despatched to South Indian Line *via* Erode, shews a large increase.

32. **Hides and Skins.**—*Skins of Sheep, &c.*—Increase tons 622 and Rs. 5,920.

33. **Jute.**—*Gunny Bags and Cloth.*—Increase tons 1,438 and Rs. 15,810. The local increase under this head, about Rs. 9,000, is nearly all attributable to increased traffic from Madras. The traffic to G. I. P. Line *via* Raichur, shews a decrease, but that to other lines *via* Guntakal and Bangalore, and from South Indian Line *via* Erode, shews an improvement of some Rs. 9,000.

34. **Metals.**—*Iron.*—Increase tons 1,729 and Rs. 17,221. This increase is due to large consignments from Madras, a considerable quantity being Iron Pipes to Bangalore presumably in connection with the Bangalore Water Supply scheme.

35. **Oils.**—*Kerosine.*—Increase tons 111 and decrease Rs. 2,468.

36. **Oil Seeds.**—*Til or Gingelly.*—Decrease tons 109 and Rs. 3,139.

37. **Oil Seeds.**—*Others.*—Increase tons 9,366 and Rs. 52,840. Rs. 37,000 of this increase is due to local traffic which has generally improved: the foreign increase is principally due to traffic received *via* Guntakal junction.

38. **Provisions.**—*Cocoanuts.*—Increase tons 206 and Rs. 1,387.

39. **Provisions.**—*Betel Nuts.*—Decrease tons 193 and Rs. 9.

40. **Provisions.**—*Vegetables.*—Increase tons 2,638 and Rs. 21,403. Of this amount Rs. 8,000 is mainly attributable to a general increase in the local traffic on the South-West Line and Bangalore Branch. The improvement in foreign traffic is in respect of vegetables sent to other lines *via* Raichur and Erode and received *via* Guntakal.

41. **Provisions.**—*Others.*—Increase tons 1,373 and Rs. 21,074.

42. **Salt.**—Decrease tons 2,967 and Rs. 20,888.

43. **Sugar.**—*Undrained.*—Increase tons 3,226 and Rs. 15,629.

44. **Tobacco.**—Increase tons 411 and Rs. 3,455.

45. **Wood.**—*Timber.*—Increase tons 2,806 and Rs. 22,221. This increase is almost entirely local, and confined to stations between Podanur and Calicut. Oiyakode, Ferek and period.

46. **All other Articles of Merchandise, Manufactured.**—*Others.*—Increase tons 3,130 and Rs. 20,307.

Working Expenses.

47. The working expenses of the two half-years compare as follows:—

	FIRST HALF OF 1892.		FIRST HALF OF 1893.		DIFFERENCE	
	Amount.	Per Cent. on Gross Earnings.	Amount.	Per Cent. on Gross Earnings.	Amount.	Per Cent.
	Rs.		Rs.		Rs.	
Maintenance ...	6,72,733	14.18	4,07,981	7.72	2,64,752	39.35
Locomotive ...	9,36,121	19.73	10,19,866	19.29	83,745	8.95
Carriage and Wagon ...	3,03,882	6.40	2,44,413	4.62	59,469	19.57
Traffic ...	4,28,522	9.03	4,42,083	8.36	13,561	3.16
General ...	2,70,909	5.71	2,56,717	5.42	14,192	5.84
Steam-boat ...	...	...	...	...	...	...
Special and Miscellaneous ...	60,885	1.28	44,645	85	16,240	26.67
Total ..	20,73,052	56.33	24,45,705	46.26	2,27,347	8.51

48. **Abstract A.**—The result of the working of the Engineering Department is a saving of Rs. 2,64,752.

49. Under "General Superintendence" there is an increase of Rs. 12,242 of which Rs. 11,264 is due to the Chief Engineer having acted as Agent and Manager during the corresponding period last year, there is also an increase of Rs. 3,484 in the Stores issued for office use, while there is a saving of Rs. 2,704 on the salary of Mr. Parsons who left the service in September, 1892 and whose vacancy was not filled by another temporary Engineer during the first half of 1893.

50. Under "Maintenance and Renewal of Permanent Way" there is a decrease of Rs. 2,70,510 of which Rs. 2,01,228 is the value of stores returned to stock during the half-year and credited to this head of expenditure instead of being deducted from the foot of the Abstract as on former occasions. This has been done for uniformity, Abstracts B and C being dealt with in the former manner. There is a saving in ordinary Maintenance charges of Rs. 91,219 against which must be set off a new charge of Rs. 21,936 for covering over sand ballast with stone.

51. There is a decrease of Rs. 40,775 under Repairs of Bridges, &c. due to the completion of the Papaghni Bridge although there are additional charges in this half-year amounting to Rs. 9,901 for strengthening weak girders, &c., on the Thootha and Booga Bridges.

52. "Repairs of Stations and Buildings" show a decrease of Rs. 14,485.

53. There is a decrease under "New Minor Works" of Rs. 4,691.

54. "Unclassified Expenditure" shows a decrease of Rs. 44,266. Although the rate of exchange in the year under review was less favourable than in the corresponding period in 1892 by 924 pence per rupee, there was a saving of Rs. 34,190 in loss by exchange due to the decreased use of English Stores consequent on the reduction in expenditure on "Maintenance," "Repairs of Bridges," &c. There was also a decrease in the cost of "Carriage of Revenue Stores" amounting to Rs. 8,343.

55. In June 1892 half-year a sum of Rs. 95,694 was deducted from the total expenditure under Abstract A. for value of stores returned to stock. As explained above the deduction is now made from sub-heads.

56. There are no charges to Fire Insurance Fund credited to this Abstract in June 1893, half-year, whereas a sum of Rs. 2,039 was so credited in June 1892 half-year.

57. The number of miles of rails removed during the half-year was 27,3928 against 35,7385 in the first half of 1892.

58. The cost of maintaining a mile of single track including sidings was Rs. 403.15 against Rs. 666.92.

59. **Abstract B.**—*Locomotive Expenses.*—The net increase amounts to Rs. 83,744.

60. "Running Expenses" increased by Rs. 2,793 due to more work done, the increase of the Engine mileage being 46,026. The cost of "Fuel" also increased by Rs. 12,811 from the same cause.

61. There is an increase of Rs. 36,218 in "Maintenance and Renewal of Locomotive Engines." This is more than covered by the English cost of 2 new Locomotives, Rs. 41,858 which has been charged off to Revenue in the month of June. There was thus a decrease in the ordinary expenditure under this heading.

62. There is a charge of Rs. 1,999 under "New Minor Works" being cost of Machinery charged off to this head, *vide* Minutes of Official Meeting held on 29th June, 1893.

63. "Unclassified Expenditure" shows an increase of Rs. 31,339. "Loss by Exchange" accounts for Rs. 34,870, and is due to a lower rate of exchange and to the larger value of English Stores expended in June 1893 half-year, as compared with the corresponding period in 1892. There was a decrease in the "Carriage of Revenue Stores" of Rs. 3,531.

64. The cost of the department per Train mile was annas 12.54 against annas 12.03 and per Engine mile annas 10.68 against annas 10.11.

65. **Abstract C.—Carriage and Wagon Expenses.**—The net decrease in expenditure is Rs. 59,469. "General Superintendence" is less by Rs. 3,759, and is due to the saving caused by the absence of the Locomotive Superintendent on furlough, and to a saving under the head of stationery.

66. There is a decrease under "Repairs and Renewals of Vehicles" of Rs. 47,485 which will be partly explained by a decrease of 98 in the number of vehicles repaired during the half-year.

67. "Repairs and Renewals of Machinery" decreased by Rs. 7,928.

68. "Unclassified Expenditure" decreased by Rs. 2,833 due to a saving in "Loss by Exchange" owing to the smaller value of English stores expended during the half-year.

69. The sum chargeable to "Fire Insurance Fund" and credited to this Abstract is less by Rs. 3,045 than in the corresponding period, last year.

70. The Carriage and Wagon Expenses per Train mile were annas 3.01 against annas 3.90, and per 1,000 vehicle miles run by home vehicles Rs. 9.19 against Rs. 12.84 in the corresponding half-year of 1892.

71. **Abstract D.—Traffic Expenses.**—The net increase amounts to Rs. 13,561.

72. Under "Salaries, Wages, &c.," the increase is Rs. 5,502. There is a decrease under "General Superintendence" of Rs. 1,475 chiefly due to the lower salaries drawn by the present Traffic Manager and the Deputy. There were some increases to Assistant Traffic Managers Rs. 1,500. "Station Staff" shows an increase of Rs. 6,658 due to increased cost of the staff generally and to additional payments of Rs. 1,582 for loading and unloading charges.

73. A decrease of Rs. 3,013 under "Fuel, Lighting, Water and General Stores" is due to a decrease of Rs. 6,923 in "Office and Station Fittings and Furniture" caused by larger expenditure under this head in June 1892 half-year. There is an increase of Rs. 4,514 for Fire, Lights, &c.

74. "Clothing" shows an increase of Rs. 1,288.

75. There is an increase under "Printing, Stationery and Tickets" of Rs. 3,646.

76. "Miscellaneous Expenses" increased by Rs. 1,036.

77. "Payments to other Lines" increased by Rs. 1,690.

78. "Unclassified Expenditure" increased by Rs. 3,263 due to increased charges for "Loss by Exchange."

79. The charges for station staff, the tonnage of goods lifted, and the ton-mileage of goods carried, compare as follows:—

	1st half of 1892.	1st half of 1893.	Difference.	
	Tons.	Tons.	Tons.	Per Cent.
Tonnage of Goods	558,497	603,317	+ 44,820	+ 8.03
	Ton-miles.	Ton-miles.	Ton-miles.	
Ton-mileage of Goods	64,720,758	74,552,734	+ 9,831,976	+ 15.19
	Rs.	Rs.	Rs.	
Station Staff	1,87,281	1,93,940	+ 6,659	+ 3.56
Train Staff	47,246	47,565	+ 319	+ .68

80. The total cost of the department averaged annas 5.44 against annas 5.51 per train mile in the corresponding half of the previous year.

81. **Abstract E.—General Charges.**—There are increases of Rs. 4,957 under "Salaries of Indian Management" Rs. 2,533 under "Electric Telegraph," and Rs. 7,894 under "Unclassified Expenditure."

82. The increase under "Salaries of Indian Management" is more than accounted for by the gratuity of Rs. 14,400 granted to the late Chief Auditor on his retirement. There was a saving to the Audit Department of Rs. 2,400 caused by the 3rd Assistant acting as General Storekeeper, and further savings owing to the lower rates of salary drawn by the Chief Auditor, Cashier and Stores Auditor. The Agent's Office also shows a decrease of Rs. 4,732 caused by the gratuity of Rs. 5,000 paid to Mr. Mellis having been charged in June 1892 half-year. In the Stores Department there is a decrease of Rs. 1,809 due to the lower rate of pay drawn by the Acting General Storekeeper.

83. Of the increase under "Electric Telegraph" Rs. 1,151 is due to increased expenditure on Signallers and Rs. 2,210 on Maintenance. There are small decreases under Salaries of Superintendents and other heads of charges.

84. The increase under "Unclassified Expenditure" is more than covered by the extra charge of Rs. 8,444 for Loss by Exchange.

85. **Abstract G.—Special and Miscellaneous.**—The net decrease of Rs. 16,240 is more than accounted for by the decrease of Rs. 18,937 under "Payments to other Lines" which is due to the smaller payments made for mileage and demurrage on Foreign Rolling Stock.

86. There is a decrease in the charges for compensation of Rs. 1,573.

87. "Rates and Taxes" have increased by Rs. 1,638, chiefly caused by payments to the Madras Municipality which did not occur in the corresponding period of 1892.

88. **Statement of Train Mileage, No. XIV.**—As compared with the first half of 1892 there was an increase in the Train-mileage of 55,716 miles or 4.47 per cent.; the miscellaneous Engine-mileage was 17.46 per cent. of the Train-mileage run against 19.02 per cent. in the corresponding half of the previous year.

SUPPLEMENTARY.

Capital.

89. The total expenditure of the half-year has been as follows :—

	RS.	A.	P.
Cash ...	...	...	...
Stores ...	...	...	...
	1,09,726	5	9
	1,15,969	12	5
	2,25,596	2	2

Less credits

Amount received from the Executive Engineer, Belgaum Division being refund of the value of Rest Camp land at Gooty	100	0	0
Recovered from the South Indian Railway Company for value of a Bungalow at Katpadi sold to them	4,550	0	0
	4,650	0	0
Net expenditure	Rs. 2,20,946	2	2

90. The following particulars shew in detail the Capital outlay of the half-year :—

Bridges.		RS.	A.	P.	RS.	A.	P.
Strengthening weak girders	Cheyair Bridge	...	...	...	1,07,590	0	10
Do.	do.	...	...	...	1,172	1	0
Substituting stronger girders	Rallavanka Bridge	...	...	...	12,831	6	6
Do.	do.	...	...	...	6,899	4	3
Bridge at 2½ Mile 4th Division, South-West Line	Booga Bridge	...	...	...	8,816	4	10
		...	...	...	1,37,309	1	5
Less Credit—		...	...	...	58,767	10	7
Re-construction of Papaganni Bridge		...	...	...	78,541	6	10

Alterations and Additions at Stations.

Jalarpet	...	...	...	...	18,018	1	1
Bangalore City	...	...	...	...	13,023	12	0
Podanur	...	...	...	...	9,538	14	9
Raichur	...	...	...	...	8,031	10	1
Ferok	...	...	...	...	5,616	7	3
Kristnapuram	...	...	...	...	5,624	7	7
Mettupalaiyam	...	...	...	...	4,743	2	11
Connur	...	...	...	...	4,479	13	5
Gooty	...	...	...	...	4,203	3	2
Renigunta	...	...	...	...	3,336	13	1
Erode	...	...	...	...	3,264	9	2
Palghat	...	...	...	...	3,044	13	5
Madras, Central Station	...	...	...	...	2,920	11	7
Arkonam	...	...	...	...	2,741	14	1
Olavacode	...	...	...	...	2,682	13	4
Manur	...	...	...	...	2,658	7	4
Cuddapah	...	...	...	...	1,900	0	9
Viziamungalam	...	...	...	...	1,712	6	1
Coimbatore	...	...	...	...	1,547	10	3
Mosur	...	...	...	...	1,535	2	4
Kallavi	...	...	...	...	1,218	11	11
Rajampet	...	...	...	...	1,195	1	6
Siddavattam	...	...	...	...	1,109	5	5
Extension of Block System	...	...	...	...	3,543	7	4
Other Stations less credits	Rs. 2,774-7-6	...	...	...	7,132	12	2
Carried over	...	...	...	...	1,14,884	4	0
					1,93,425	10	10

Rolling Stock.

	RS.	A.	P.	RS.	A.	P.
Brought over...	...	...	...	1,93,425	10	10
6 Brake Vans	...	...	...	18,185	4	7
4 Tank Wagons for Kerosine Oil	...	...	...	1,794	2	8
3230 Screw Couplings	...	...	...	6,573	14	0
1200 Centre Chains	...	...	...	967	2	1
				27,520	7	4
Total Rs...	...	...	...	2,20,946	2	2

91. The following is a Summary of the operations on the Store accounts during the half-year :—

	RS.	A.	P.
Stores Balances at 31st December, 1892	...	...	...
	29,25,392	10	8
Add Receipts.—			
From England	4,62,292	14	8
Local purchases	7,19,255	1	5
	11,81,548	0	1
	41,06,940	10	9

Deduct Issues—

	RS.	A.	P.
Capital Account	1,15,869	12	5
Revenue	6,55,469	11	11
Sales	1,22,325	7	6
	8,93,664	15	10
Stores Balances at 30th June, 1893	...	...	...
	32,13,275	10	11

92. At the request of the Government Examiner the following Accounts have been transferred from the Capital to the Revenue Balance Sheet :—

Madras Railway Employes' Guarantee Fund.

Do. Contractors' Security Fund.

Do. Provident Fund.

Do. Provident Institution.

Do. Sick and Allowance Fund.

Government Securities Sick and Allowance Fund.

Do. Provident Fund.

Government and other Securities, Madras Railway Provident Institution.

Government of India Special Funds' Account.

Bank of Madras, Madras Railway Provident Institution.

New Oriental Bank Corporation, Limited, Sick and Allowance Fund.

Bank of Madras, General Account.

93. The Cash Balance in the Bank of Madras on account of the old Provident Fund has been transferred to the "Bank of Madras, General Account" during the half-year, the Provident Fund Account with the Bank of Madras being closed.

Revenue.

94. The percentage of expenditure to gross receipts for the past three half-years has been as under :—

June 1892	56.33 per cent.
December 1892	54.50 „
June 1893	46.26 „

95. The net Revenue amounts to Rs. 28,41,008-14-7 as compared with Rs. 20,72,049-8-7 in the corresponding half of 1892. It gives at 1s. 10d per Rupee, £ 260,425-16-4 equal to a dividend of £ 2-7-1 per cent. for the half-year on the capital bearing interest raised at the 30th June, 1893, viz., £ 11,057,630.

96. It is very worthy of notice that the difference between net earnings and the amount of interest due on capital and debentures is only Rs. 70,284-5-10 or £ 6,442-14-8 and that, after deducting the actual amount of interest payable on all debentures and the share capital at $4\frac{1}{2}$ and $4\frac{3}{4}$ per cent. the balance of net earnings is sufficient to pay a dividend of £ 4-17-0 $\frac{1}{2}$ per cent. per annum on the capital on which interest at the rate of 5 per cent. is guaranteed by Government, as per following figures :—

Total amount of net earnings ..	...	...	...	£ 260,425 16 4
Interest on following :—				
£ 999,960 @ $4\frac{3}{4}$ per cent.		£ 23,749 1 0		
500,000 @ $4\frac{1}{2}$ „		11,250 0 0		
140,000 @ $3\frac{1}{2}$ „		2,450 0 0		
462,200 @ $3\frac{1}{4}$ „		7,510 15 0		
197,800 @ 3 „		2,967 0 0		
			47,926 16 0	
			Balance...£ 212,499 0 4	

which would provide interest at the rate of £ 4-17-0 $\frac{1}{2}$ per cent. per annum on the remaining capital of £ 8,757,670.

97. The following results of our Traffic operations in the way of dividend are continued from the last report :—

PERIOD.	Miles Open.	Capital raised at 31st December.	NET REVENUE.	Average per cent. per annum for periods of 5 years, &c.
Average for 5 years 1871—75	845	£ 10,280,682	£ 235,549 1 0	2 6 0
„ 1876—80	853	10,526,673	224,439 17 6	2 2 9
„ 1881—85	860	10,638,258	245,448 10 6	2 6 1
„ 1886—90	842	10,697,630	327,998 6 9	3 1 3
The year 1891	840	10,857,630	358,098 11 0	3 6 0
„ 1892	840	11,057,630	393,445 10 3	3 11 2
First half of 1893	840	11,057,630	* 260,425 16 4	4 14 2

* Must be doubled to give percentage per annum.

98. The amount charged to Revenue for Loss by Exchange on the cost of Revenue stores and Home expenditure was Rupees 1,64,163-9-2. The rate of Exchange was 14.757d. per Rupee which is .921d below the rate for the corresponding half of 1892.

99. Abstract H, Coaching Traffic, Form No. X of the accounts, presents the following results when compared with the corresponding half-year :—

Abstract H, June 1892 ...	...	...	...	Rs. 18,40,926 4 1
Do. „ 1893 ...	...	...	...	20,32,391 8 2
Increase	...	...	...	1,91,465 4 1

100. The details of the above Results are given in the following table :—

TRAFFIC.	Half-year ending June, 1892.			Half-year ending June, 1893.			Increase.			Decrease.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Ordinary Passgrs. 1st Class.	70,844	10	2	78,940	11	1	8,096	0	11	...	...	...
Periodical ...	1,343	0	0	1,520	0	0	177	0	0	...	...	...
2nd Class ...	72,658	15	4	86,911	2	10	14,252	3	6	...	...	...
Periodical ...	1,222	15	0	1,422	15	0	200	0	0	...	...	...
3rd Class ...	13,51,773	6	6	15,35,774	13	4	1,84,001	6	10	...	...	...
Periodical ...	1,679	9	0	1,523	8	0	...	...	...	156	1	0
Troops & Police, 1st Class.	6,157	5	0	4,983	7	6	...	...	...	1,173	13	6
2nd Class.	25,589	2	0	19,636	7	9	...	...	...	5,952	10	3
3rd Class.	56,947	15	0	41,184	15	11	...	...	...	15,762	15	1
Passengers' Luggage ...	59,772	9	11	61,233	14	4	1,461	4	5	...	...	...
Carriages ...	9,136	8	0	8,340	7	0	...	...	...	796	1	0
Horses ...	28,920	7	4	28,367	11	10	...	...	...	552	11	6
Dogs ...	2,645	8	7	2,551	4	7	...	...	...	94	4	0
Parcels ...	1,01,956	0	11	1,15,188	2	4	13,232	1	5	...	...	...
Do. for Revenue ...	1,979	0	0	1,832	8	0	...	...	...	146	8	0
Special Trains ...	5,302	8	0	6,640	0	0	1,337	8	0	...	...	...
Miscellaneous ...	3,255	12	1	7,284	0	3	4,028	4	2	...	...	...
Haulage and hire of Post Office Vans ...	11,636	0	0	11,525	2	4	...	...	...	110	13	8
MILITARY.												
Military Baggage ...	23,104	9	9	14,988	13	6	...	...	...	8,115	12	3
Carriages ...	...	...	...	...	...	...	...	...	...	2,455	...	...
Horses ...	4,951	15	0	2,496	5	0	...	...	...	3	10	0
Dogs, &c. ...	48	6	6	45	1	7	...	...	...	3	4	11
	18,40,926	4	1	20,32,391	8	2	2,26,785	13	3	35,320	9	2
							Deduct Decrease ...			35,320	9	2
							Net Increase ...			1,91,465	4	1

101. The ordinary Coaching Traffic, ascertained by eliminating all Troops and Police, and Military items of traffic is continued from the last Report—

	RS.	A.	P.
December 1880 ...	11,47,898	1	5
June 1881 ...	12,54,404	1	5
December 1881 ...	12,18,181	7	10
June 1882 ...	12,78,447	11	0
December 1882 ...	13,02,002	4	1
June 1883 ...	12,97,015	15	6
December 1883 ...	12,73,014	2	7
June 1884 ...	14,10,745	4	7
December 1884 ...	13,85,847	11	7
June 1885 ...	14,63,321	5	7
December 1885 ...	15,29,401	15	10
June 1886 ...	15,02,885	3	6
December 1886 ...	15,49,747	3	4
June 1887 ...	15,84,759	3	3
December 1887 ...	15,31,357	3	9
June 1888 ...	16,61,024	2	10
December 1888 ...	17,13,097	12	10
June 1889 ...	17,81,789	6	8
December 1889 ...	17,75,541	7	2
June 1890 ...	17,64,039	8	10
December 1890 ...	18,19,560	1	1
June 1891 ...	17,68,118	0	7
December 1891 ...	16,52,970	14	10
June 1892 ...	17,24,126	14	10
December 1892 ...	18,03,769	5	4
June 1893 ...	19,49,056	4	11

102. Statement showing 3rd and 4th-Class Receipts minus Troops and Police from 1873 to June 1893.

PERIOD.			3rd-Class Single Journey, excess, Return Journey and Season Tickets.			4th or Cooly Class.			Total 3rd and 4th Classes.		
			RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Half-year ending	June	1873	8,54,760	15	9	93,640	13	0	9,48,401	12	9
"	December	1873	8,41,653	1	4	1,08,073	9	0	9,49,726	10	4
"	June	1874	7,89,366	1	11	1,13,226	15	0	9,02,593	0	11
"	December	1874	8,31,655	4	7	1,18,789	11	0	9,50,444	15	7
"	June	1875	7,32,250	15	8	1,68,858	13	0	9,01,109	12	8
"	December	1875	6,72,465	4	6	1,73,676	13	0	8,46,142	1	6
"	June	1876	7,15,531	11	6	2,03,373	9	0	9,19,905	4	6
"	December	1876	7,41,657	1	7	2,19,170	13	0	9,60,827	14	7
"	June	1877	6,38,448	12	8	2,42,352	2	6	8,80,800	15	2
"	December	1877	8,79,633	13	10	1,20,088	11	0	9,99,722	8	10
"	June	1878	9,01,376	1	3	67,642	11	0	9,69,018	12	3
"	December	1878	8,04,743	8	3	1,14,829	12	0	9,19,573	4	3
"	June	1879	6,35,114	10	2	2,65,729	13	0	9,00,844	7	2
"	December	1879	9,29,071	10	9	...	...	...	9,29,071	10	9
"	June	1880	9,04,920	9	10	...	...	...	9,04,920	9	10
"	December	1880	8,96,463	1	1	...	...	...	8,96,463	1	1
"	June	1881	9,52,306	12	1	...	...	...	9,52,306	12	1
"	December	1881	9,43,731	12	9	...	...	...	9,43,731	12	9
"	June	1882	9,72,568	4	7	...	...	...	9,72,568	4	7
"	December	1882	10,05,113	6	2	...	...	...	10,05,113	6	2
"	June	1883	10,10,789	4	7	...	...	...	10,10,789	4	7
"	December	1883	9,61,665	0	1	...	...	...	9,61,665	0	1
"	June	1884	10,58,699	12	8	...	...	...	10,58,699	12	8
"	December	1884	10,47,457	10	4	...	...	...	10,47,457	10	4
"	June	1885	10,95,135	7	6	...	...	...	10,95,135	7	6
"	December	1885	11,65,264	9	5	...	...	...	11,65,264	9	5
"	June	1886	11,59,988	9	10	...	...	...	11,59,988	9	10
"	December	1886	11,84,455	6	3	...	...	...	11,84,455	6	3
"	June	1887	12,20,247	9	0	...	...	...	12,20,247	9	0
"	December	1887	11,61,859	8	10	...	...	...	11,61,859	8	10
"	June	1888	12,48,832	15	11	...	...	...	12,48,832	15	11
"	December	1888	13,34,289	7	9	...	...	...	13,34,289	7	9
"	June	1889	13,57,252	6	7	...	...	...	13,57,252	6	7
"	December	1889	13,92,223	13	3	...	...	...	13,92,223	13	3
"	June	1890	13,69,221	5	1	...	...	...	13,69,221	5	1
"	December	1890	14,48,927	4	1	...	...	...	14,48,927	4	1
"	June	1891	14,00,154	9	11	...	...	...	14,00,154	9	11
"	December	1891	12,73,641	14	9	...	...	...	12,73,641	14	9
"	June	1892	13,53,452	15	6	...	...	...	13,53,452	15	6
"	December	1892	14,11,625	15	5	...	...	...	14,11,625	15	5
"	June	1893	15,37,298	5	4	...	...	...	15,37,298	5	4

103. The number, mileage and earnings of 3rd-Class Ordinary traffic, leaving out Troops and Police from the commencement of the 2-pie rate are as follow :—

PERIOD.			Number.	Mileage.	Earnings.		
					RS.	A.	P.
Half-year ending	December	1879	1,771,690	76,638,889½	(a) 9,29,071	10	9
"	June	1880	1,964,346	79,706,402	(b) 9,04,920	9	4
"	December	1880	1,943,145	86,424,275	8,96,463	1	1
"	June	1881	2,111,075	91,814,076	9,52,306	12	1
"	December	1881	2,067,218½	90,818,781	9,43,731	12	9
"	June	1882	2,189,409	93,761,162	9,72,568	4	7
"	December	1882	2,046,457	96,895,425	10,05,113	6	2
"	June	1883	2,195,218½	97,623,795	10,10,789	4	7
"	December	1883	2,150,308	97,581,832	9,61,665	0	1
"	June	1884	2,593,543	108,370,675	10,58,699	12	8
"	December	1884	2,488,817	108,124,439	10,47,457	10	4
"	June	1885	2,639,473½	112,860,077	10,95,135	7	6
"	December	1885	2,798,556	121,224,909	11,65,264	9	5
"	June	1886	2,928,490	120,522,393	11,59,988	9	10
"	December	1886	3,288,543½	135,980,143	11,84,455	6	3
"	June	1887	3,543,684½	140,170,209	12,20,247	9	0
"	December	1887	3,372,135½	133,848,628	11,61,859	8	10
"	June	1888	3,724,290	142,695,239	12,48,832	15	11
"	December	1888	3,951,553½	151,690,598	13,34,289	7	9
"	June	1889	4,198,943	155,414,335	13,57,252	6	7
"	December	1889	4,218,179	159,361,635	13,92,223	13	3
"	June	1890	4,184,208	156,902,111	13,69,221	5	1
"	December	1890	4,134,756½	162,833,527	14,48,927	4	1
"	June	1891	4,206,099½	156,004,790	14,00,154	9	11
"	December	1891	3,919,473	148,726,896	12,73,641	14	9
"	June	1892	4,259,953½	159,063,622	13,53,452	15	6
"	December	1892	4,487,133	165,641,362	14,11,625	15	5
"	June	1893	4,998,677	180,292,338	15,37,298	5	4

Note.—(a). Half-year ending December 1879, 2 pies for Ordinary trains from 1st July 1879, and 4 pies for Mail trains.

(b). Half-year ending June, 1880, 2 pies are charged for Ordinary trains and 4 pies for Mail trains for first four months, and 2 pies by all trains for the last 2 months, viz., from 1st May, 1880.

(c). Fare and half for Return tickets from 1st October, 1883.

(d). One and half pies for single journey passengers for Ordinary trains and 2 pies for Mail trains, but to and from stations between Podanur and Mettupalaiyam and Podanur and Bepore, 1½ pies rate charged by Mail trains.

(e). Half-year ending June 1888, on and after 5th March 1888, 2 pies are charged for passengers booked to and from stations west of Podanur by Mail trains except that for stations on the Nilgiri and Palghat branches, the fares by Mail trains are 1½ pies per mile.

(f). From 1st March 1890, the fares by Mail trains throughout the Line are 2 pies per mile.

(g). From 1st October 1890, the fares by Mail trains throughout the line are 3 pies per mile.

(h). From 1st August 1891, the fares by Mail trains are 2½ pies per mile except that for stations between Podanur and Calicut and Palghat branches the fares by Mail trains are 1½ pies per mile.

104. The Receipts from Parcels traffic (Public) during the past ten years have been as follows :—

Half-year ending	December	1883	RS.	A.	P.
"	June	1884	81,808	9	8
"	December	1884	78,156	3	5
"	June	1885	96,567	14	10
"	December	1885	83,992	5	9
"	June	1886	1,07,520	9	0
"	December	1886	83,999	5	11
"	June	1887	1,00,021	9	5
"	December	1887	99,437	10	6
"	June	1888	1,10,502	0	8
"	December	1888	1,13,351	13	6
"	June	1889	1,22,872	15	4
"	December	1889	1,14,325	6	2
"	June	1890	1,22,051	4	4
"	December	1890	1,06,372	12	1
"	June	1891	1,23,187	6	8
"	December	1891	1,04,555	8	4
"	June	1892	1,18,642	12	8
"	December	1892	1,01,956	0	11
"	June	1893	1,34,095	5	1
"	December	1893	1,15,188	2	4

105. It will be seen from a comparison of the several heads of Abstract I. that the following have been the fluctuations which have led to the net increase of Rs. 3,44,716-9-8.

TRAFFIC.	Half-year ending June, 1892.			Half-year ending June, 1893.			Increase.			Decrease.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1. Merchandise, General...	23,37,267	9	2	29,04,805	0	11	3,67,540	7	9	11,118	1	0
2. Military Stores	43,920	15	0	32,802	14	0	...	...	...	22,179	6	5
3. Railway Materials	26,879	2	5	4,699	12	0	...	...	...	...	...	...
4. Coal	1,17,549	6	0	1,49,266	0	0	31,719	10	0	12,306	14	0
5. Revenue Stores	57,031	5	0	44,774	7	0	...	...	...	1,619	3	0
6. Live Stock	12,327	7	0	10,678	4	0	...	...	...	7,352	2	0
7. Military Live Stock	11,753	0	0	4,400	14	0	...	...	...	...	...	...
8. Rents and Demurrage	4,571	12	10	5,090	5	7	518	8	9	...	...	...
9. Interest on Outstanding Bills	...	...	...	1,844	6	1	...	...	...	456	6	5
10. Miscellaneous	2,300	12	6	...	...	...	...	...	...	...	...	...
TOTAL...	23,13,648	5	11	31,58,364	15	7	3,99,778	10	6	55,062	0	10
Deduct Decrease							55,062	0	10			
Net Increase							3,44,716	9	8			

106. The following table prepared from the Analysis will show the progress of our business and the economy observed in conducting it:—

TRAFFIC.	June 1882.	Dec. 1882.	June 1883.	Dec. 1883.	June 1884.	Dec. 1884.	June 1885.	Dec. 1885.	June 1886.	Dec. 1886.	June 1887.	Dec. 1887.	June 1888.	Dec. 1888.	June 1889.	Dec. 1889.	June 1890.	Dec. 1890.	June 1891.	Dec. 1891.	June 1892.	Dec. 1892.	June 1893.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Total earnings per train-mile ...	3-475	3-575	3-574	3-478	3-419	3-280	3-483	3-389	3-553	3-459	3-587	3-448	3-584	3-552	3-778	3-908	3-977	3-757	3-802	3-612	3-811	3-828	4-064
" Working expenses per train-mile ...	2-230	2-198	2-247	2-119	1-953	1-993	2-004	1-926	2-036	2-129	2-267	2-289	2-093	2-097	2-128	2-405	2-105	1-948	2-220	2-094	2-147	2-086	1-880
Total net earnings per train-mile.	1-245	1-377	1-327	1-359	1-466	1-287	1-479	1-463	1-517	1-330	1-320	1-159	1-491	1-455	1-650	1-503	1-868	1-809	1-582	1-518	1-664	1-742	2-184
COACHING TRAFFIC.																							
<i>Average sum received for carrying a unit one mile.</i>	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	
First class ...	14-71	13-94	14-32	12-44	14-30	13-65	14-90	13-09	13-95	11-81	15-29	10-50	13-54	10-95	14-67	9-37	11-66	10-16	11-24	9-73	10-32	10-32	10-18
Second class ...	6-28	6-07	5-67	5-79	5-93	6-06	5-96	5-85	5-56	5-97	6-03	5-51	6-10	5-58	5-51	5-21	5-33	4-53	5-48	5-16	5-29	5-34	5-13
Lowest class ...	1-99	1-99	1-99	1-94	1-88	1-86	1-87	1-85	1-85	1-66	1-66	1-67	1-70	1-70	1-68	1-68	1-68	1-72	1-73	1-63	1-63	1-64	1-64
Average for all classes...	2-29	2-26	2-22	2-19	2-13	2-09	2-11	2-05	2-06	1-88	1-86	1-86	1-92	1-87	1-87	1-81	1-84	1-86	1-90	1-81	1-78	1-79	1-78
<i>Average cost of hauling a Coaching unit one mile.</i>	1-28	1-18	1-13	1-09	98	95	98	93	96	98	1-10	1-21	1-03	1-01	99	1-07	90	91	1-09	1-03	1-04	1-03	82
Per passenger unit ...	1-01	1-08	1-09	1-10	1-24	1-14	1-13	1-12	1-10	90	76	65	89	86	88	74	94	95	81	78	74	76	96
Average profit per passenger ...	37-57	41-11	36-28	32-66	32-55	28-89	36-95	34-46	35-35	35-01	36-53	36-27	35-59	37-30	39-25	35-31	38-60	37-60	39-77	37-34	37-92	36-88	39-07
Average sum received for other coaching traffic per ton per mile.	16-63	12-04	13-21	10-08	13-47	13-06	15-21	14-16	15-25	15-68	15-57	16-80	13-49	13-46	14-06	14-29	12-17	11-81	14-00	12-52	13-29	11-81	11-16
Average cost of hauling other coaching traffic per ton per mile.	20-89	29-07	23-07	22-58	19-08	15-83	21-74	20-30	20-10	19-33	20-96	19-47	22-10	23-84	25-19	20-92	26-43	25-79	25-77	24-82	24-63	25-07	27-91
Average profit per ton ...	8-79	8-99	8-87	8-60	7-75	7-69	7-93	7-65	7-76	7-59	7-73	7-75	7-83	7-79	7-90	7-60	7-83	7-49	7-42	7-16	8-33	8-27	8-12
Average sum received for carrying a ton one mile	6-19	6-39	6-36	6-03	5-29	5-57	5-16	5-00	5-09	5-25	5-23	5-33	4-91	5-02	4-73	4-88	4-13	4-05	4-46	4-25	4-63	4-41	3-76
Average cost of hauling a goods unit, viz., one ton one mile ..	2-60	2-60	2-51	2-52	2-46	2-12	2-77	2-65	2-78	2-31	2-50	2-37	2-92	2-77	3-17	2-72	3-70	3-44	2-96	2-91	3-70	3-86	4-36
Average profit on working a goods unit (viz. one ton), one mile ..																							

107. The following Classification of all Goods carried is designed to show Country and Foreign Trade:—

DESCRIPTION.	Half-year ending June, 1892.		Half-year ending June, 1893.	
	Maunds.	Rupces.	Maunds.	Rupces.
COUNTRY TRADE.				
Food Grains ...	2,805,874	6,06,282	3,556,846	7,74,123
Miscellaneous articles for Domestic Consumption ...	1,950,289	5,28,123	2,396,273	6,32,653
Salt and Saltpetre ...	824,931	1,68,994	743,470	1,47,939
Firewood and Fuel ...	394,992	16,522	515,697	22,279
Materials used in Building, Construction and Manufacture ...	936,819	2,15,018	1,015,578	2,46,806
Cloths, Piece Goods and Twist, (Indian) ...	122,025	60,972	143,632	71,840
Sundries ...	1,191,402	3,61,612	1,435,559	3,93,711
Total...	8,226,332	19,57,528	9,807,055	22,89,351
FOREIGN TRADE.				
Exports of Colonial Produce ...	1,240,632	4,81,802	1,432,261	5,31,344
Imports, Cloths, Piece Goods and Twist, (European) ...	79,851	46,010	74,154	39,970
European Stores for consumption in India ...	111,198	37,971	104,638	37,056
Coal and Coke for the Public ...	615,392	1,06,417	802,847	1,38,876
Do. for the Company ...	235,116	11,130	159,939	10,390
Government Stores ...	26,723	43,921	20,686	32,803
Railway Materials, &c. ...	760,619	40,835	70,228	11,787
Total...	3,069,531	7,68,086	2,664,753	8,02,226
Grand Total...	11,295,863	27,25,614	12,471,808	30,91,577

108. The following Statement is framed to give a comparison of the Internal Trade (sub-divided into Food Grains and other Commodities) and the External or Foreign Trade (Exports or Imports) passing over the Railway for a series of years:—

PERIODS.	COUNTRY TRADE.				Foreign Trade, Exports or Imports.		Government Stores.		Railway Stores.		TOTAL.	
	Food Grains.		Other Commodities.		Foreign Trade, Exports or Imports.		Government Stores.		Railway Stores.		TOTAL.	
	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.
December 1876	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.
Do. 1877	6,448,865	15,09,576	8,147,737	15,96,579	1,961,615	10,20,858	128,875	1,27,925	31,521	4,791	16,718,613	42,59,729
Do. 1878	20,037,072	47,11,730	5,404,879	16,25,584	1,323,601	5,65,916	121,515	1,23,701	36,818	6,119	26,923,885	70,35,690
Do. 1879	6,068,324	12,59,187	6,779,428	14,31,125	1,508,633	6,72,187	117,811	1,52,581	38,055	4,616	14,512,251	35,19,726
Do. 1880	5,724,530	12,24,775	9,399,199	16,06,998	1,791,713	7,66,609	69,672	78,146	27,769	3,755	17,612,883	36,79,883
Do. 1881	3,553,664	6,58,852	11,014,224	17,01,821	1,876,213	7,99,668	92,832	92,317	51,461	8,685	16,588,404	32,61,373
Do. 1882	3,377,162	6,38,158	7,996,265	17,66,455	2,112,658	8,52,693	74,214	75,564	85,805	16,013	13,646,134	33,49,083
Do. 1883	3,380,150	6,44,323	7,032,359	19,46,539	2,676,042	10,35,624	99,611	1,07,681	2,723	528	13,190,895	37,34,695
Do. 1884	3,158,585	4,90,871	8,075,372	20,37,915	2,679,301	9,82,154	93,449	1,09,135	5,067	1,387	14,011,587	36,21,462
Do. 1885	4,757,712	7,03,707	8,552,134	21,13,790	3,044,239	9,05,763	75,999	93,449	2,242,349	20,133	18,672,433	38,36,842
Do. 1886	5,392,637	7,60,500	9,243,368	22,36,514	2,306,882	7,83,519	77,438	71,660	716,531	2,81,658	17,736,536	41,33,851
Do. 1887	4,919,219	7,42,809	9,448,170	21,94,224	3,070,405	10,77,417	57,316	61,217	612,079	2,16,169	18,107,189	42,91,536
Do. 1888	4,764,584	7,00,158	10,986,294	23,37,815	3,022,418	10,77,268	59,331	70,978	977,516	2,80,148	19,810,093	44,66,367
Do. 1889	5,397,284	8,55,062	11,372,590	24,42,203	2,796,380	10,41,747	41,798	67,461	1,335,291	1,95,869	20,164,846	44,89,286
Do. 1890	5,903,788	11,08,772	11,567,893	24,44,760	3,348,214	12,13,195	42,947	68,616	859,499	1,97,166	22,198,163	50,31,232
Half-year ending June 1891	3,147,023	10,96,066	12,919,984	25,30,520	3,532,586	12,80,920	36,780	55,099	859,499	1,97,166	23,582,056	51,59,771
Do. Dec. 1891	4,669,761	5,83,562	5,936,164	12,63,066	1,939,438	6,04,704	23,255	43,785	763,923	1,39,574	11,810,303	26,34,631
Do. June 1892	2,865,874	8,32,737	5,448,180	12,39,951	1,939,304	5,68,507	21,372	38,838	240,934	49,263	12,379,551	27,28,966
Do. Dec. 1892	3,444,841	6,06,282	5,420,458	13,51,246	2,282,189	6,83,330	26,723	43,921	760,619	40,845	11,295,863	27,25,614
Do. June 1893	3,556,846	7,14,125	5,814,562	13,44,816	2,434,640	6,82,500	29,492	49,056	645,532	18,522	12,359,087	28,09,019
Do. Dec. 1893	3,556,846	7,74,123	6,250,209	15,13,228	2,573,839	7,57,636	20,686	32,803	70,228	11,787	12,471,808	30,91,577

The total in the foregoing for the past half-year, viz., Rupees 30,91,577 is made up from items in Abstract I. of the Revenue Account thus:—

1. Merchandise	...	Rs. 29,04,808
2. Military Stores	...	...
3. Railway Materials	...	4,700
4. Coal for the Public, &c.	...	1,49,265
		Rs. 30,91,577

109. The following are the chief Commodities interchanged with Foreign Railways working with the Madras Railway with the half-year under review, and the corresponding half-year in 1892:—This statement shews an increase in weight of 34,116 tons and in amount of Rs. 2,10,021 during the past half-year.

DESCRIPTION OF COMMODITY.	TO AND FROM FOREIGN RAILWAYS.			
	Half-year ending June, 1892.		Half-year ending June, 1893.	
	Tons.	Rs.	Tons.	Rs.
I. COAL AND COKE—				
II. COTTON.—	1,150	12,504	2,706	27,973
1. Raw ...	...	...	...	...
2. Twist and Yarn—	386	5,161	350	4,267
(a). European ...	698	6,588	698	7,890
(b). Indian ...	...	...	...	...
3. Piece Goods—	464	8,677	339	6,601
(a). European ...	1,355	18,956	1,730	23,786
(b). Indian ...	...	...	...	...
III. DRUGS AND CHEMICALS—				
1. Intoxicating, other than Opium ...	...	...	...	...
2. Non-intoxicating—				
(a). Cinchona bark ...	252	2,355	366	2,601
(b). Others ...	...	...	...	...
IV. DYES AND TANS—				
1. Indigo ...	177	3,224	281	5,609
2. Myrabolams ...	187	1,365	160	883
3. Aniline dyes ...	...	...	...	...
4. Dye or Redwood ...	146	1,057	187	1,112
5. Bark (tanning)...	3,810	50,906	3,620	46,468
6. Others... ..	461	2,172	639	3,081
V. GRAIN—				
1. Wheat... ..	1,351	12,846	1,653	11,984
2. Rice	4,293	17,769	13,549	80,876
3. Cholum and Cumboo ...	22,544	1,51,748	10,250	66,741
4. Gram	3,281	17,240	7,276	44,820
5. Raggy	7,115	39,430	19,372	1,26,685
6. Others	5,078	21,328	20,082	82,899
VI. HIDES AND SKINS—				
1. Hides of Cattle ...	993	14,677	875	18,138
2. Skins of Sheep, &c. ...	5,742	1,01,672	6,276	1,01,150
VII. HORNS	...	...	...	...
VIII. JUTE—				
1. Raw	1,158	10,957	1,828	17,994
2. Gunny bags and Cloth ...	...	...	...	...
IX. LAC—				
1. Stick	...	...	...	...
2. Shell-lac	...	...	...	...
X. LEATHER MANUFACTURED ...	...	...	...	...
XI. LIQUORS—				
1. Beer	625	10,092	479	8,225
2. Wines	35	597	28	538
3. Spirits	1,230	7,420	701	4,315
XII. METALS—				
1. Copper, unwrought ...	1,379	17,061	1,893	20,126
2. Iron	...	...	...	...
3. Tin	218	4,225	273	2,394
4. Others	...	...	...	...
XIII. OILS—				
1. Castor... ..	158	572	525	1,108
2. Kerosine	724	9,180	769	7,678
3. Others	538	2,454	790	3,662
Carried forward ..	65,548	5,51,733	97,705	7,29,604

DESCRIPTION OF COMMODITY.	TO AND FROM FOREIGN RAILWAYS.			
	Half-year ending June, 1892.		Half-year ending June, 1893.	
	Tons.	Rs.	Tons.	Rs.
Brought forward...	65,548	5,51,733	97,705	7,29,604
XIV OIL SEEDS—				
1. Linseed ...	129	1,907	204	542
2. Mustard and Rape ...	...	...	...	...
3. Til or Gingelly... ..	4,011	35,785	2,715	24,104
4. Castor... ..	1,016	8,400	1,295	6,879
5. Others... ..	7,608	14,752	8,357	29,925
XV. OPIUM	...	...	...	...
XVI. PAPER AND PASTE BOARD ...	...	...	38	553
XVII. PROVISIONS—				
1. Ghee	220	2,619	394	4,516
2. Coconuts	1,591	15,143	1,342	12,893
3. Betel-nuts	2,881	31,419	2,726	31,325
4. Vegetables	1,962	16,895	3,675	30,483
5. Others... ..	8,046	37,652	7,269	39,693
XVIII. RAILWAY PLANT & ROLLING STOCK.	...	...	...	...
XIX. SALT	1,976	14,812	716	6,272
XX. SALTPETRE	...	...	...	...
XXI. SILK—				
1. Raw—				
(a). Foreign... ..	...	...	...	...
(b). Indian	...	...	...	...
2. Piece Goods—			37	830
(a). Foreign	...	...	...	...
(b). Indian	...	...	...	...
XXII. SPICES	699	8,543	612	7,184
XXIII. SUGAR—				
1. Drained	623	4,880	711	5,353
2. Undrained	4,739	38,585	7,071	56,450
XXIV. STONE AND LIME	1,316	9,631	974	5,251
XXV. TEA—				
1. Foreign	...	...	...	...
2. Indian	25	1,327	34	1,019
XXVI. WOOD—				
1. Timber	4,519	26,032	4,658	28,123
2. Firewood	...	...	...	...
XXVII. TOBACCO	1,697	20,316	1,833	18,737
XXVIII. UMBRELLAS	...	...	...	...
XXIX. WOOL—				
1. Raw	...	...	...	...
2. Piece Goods—			68	503
(a). European	...	...	...	...
(b). Indian	128	1,371	161	1,610
3. Shawls	...	...	...	...
XXX. COFFEE	834	9,666	834	11,131
XXXI. MANURE—Bones and Oil cake. ...	382	1,347	805	3,574
XXXII. GOVERNMENT STORES—				
1. Military Baggage	...	...	...	...
2. Commissariat Stores	278	10,661	237	8,514
3. Ordnance Stores	407	15,701	360	14,796
XXXIII. ALL OTHER ARTICLES OF MER- CHANDISE—				
1. Unmanufactured	596	8,007	698	9,673
2. Manufactured—				
(a). Combustibles	104	2,424	114	2,358
(b). Others	4,927	44,237	5,565	55,972
Other Items	1,275	7,871	445	3,870
Total...	1,17,537	9,41,716	1,51,653	11,51,737

110. The interchange of Passenger traffic with the Railways that are connected with the Madras Railway is given in the following table, and shews an increase in numbers by 28,807 and in amount of Rupees 28,749-14-2 as compared with the corresponding half-year:—

PASSENGERS' TRAFFIC.	TO AND FROM FOREIGN RAILWAYS.							
	Half-year ending June, 1892.				Half-year ending June, 1893.			
	No.	Amount.			No.	Amount.		
		Rs.	A.	P.		Rs.	A.	P.
Passengers	1,705½	25,125	4	4	1,810	28,798	11	4
"	3,445½	23,027	3	1	4,671½	29,725	8	4
"	192,343½	1,84,087	8	10	221,416½	2,23,265	13	7
Soldiers	352½	4,757	0	0	255	3,496	7	6
"	4,758	19,902	2	6	3,168½	14,194	7	3
"	18,272	48,881	3	9	17,694½	34,500	0	8
Return Fares	48	1,104	6	0	54	1,119	4	0
"	42	410	4	0	59	647	12	0
"	2,002	229	2	9	2,647	456	5	0
Excess	...	62	1	0	...	386	4	0
"	...	236	2	0	...	53	5	6
"	...	297	3	6	...	225	8	9
TOTAL...	222,969	3,08,119	9	9	2,51,776	3,36,869	7	11

Expenditure.

111. The notes against each head of Expenditure in the following table shew, generally, in a comparative form, the work done in each department for each half-year:—

DEPARTMENTS.	HALF-YEAR ENDING JUNE, 1892.						HALF-YEAR ENDING JUNE, 1893.					
	Work of Departments.			Cost.			Work of Departments.			Cost.		
	Ms.	ch.	ft.	Rs.	A.	P.	Ms.	ch.	ft.	Rs.	A.	P.
ABSTRACT A. Maintenance of Way, Works and Stations	1,008	56	54½	6,72,733	4	14-18	1,011	78	22½	4,07,981	3	10-7-2
ABSTRACT B. Locomotive Expenses	Gross Mileage of Engines, 1,481,908 Number of Engines under repair at any one time, 39.			9,36,121	7	3-19-73	Gross Mileage of Engines, 1,527,934 Number of Engines under repair at any one time, 42.			10,19,866	0	2-19-29
ABSTRACT C. Carriage and Wagon Expenses	Number of Vehicles under repair at any one time, 172. Number con- structed and renewed 50.			3,03,882	5	3-6-40	Number of Vehicles under repair at any one time, 171. Number con- structed and renewed 27.			2,44,413	0	6-4-62
ABSTRACT D. Traffic Expenses	Profitable Train Mileage, 1,245,122 Number of Stations, 139.			4,28,521	7	11-9-03	Profitable Train Mileage, 1,300,838 Number of Stations, 141.			4,42,083	1	5-8-36
ABSTRACT E. General Charges	Miles open, 810.			2,70,909	4	6-5-71	Miles open, 840.			2,86,716	9	11-5-42
ABSTRACT G. Special and Miscellaneous Expenses	...			60,884	8	9-1-28	...			44,644	12	1-8-5
TOTAL...	26,73,032			5	9		21,45,701			11	11	

Railway Schools.

112. The particulars of the Attendance and Cost of all Railway Schools, during the half-year are as under:—

NAME OF SCHOOL.	Number on Register.	Average attendance.	Expenditure.			Receipts.			Net Cost.		
			RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Perambur ...	135	108 83	a 2,041	9	10	612	11	6	1,428	14	4
Katpadi (Closed 31st May, 1893.) ..	7	5 00	231	10	9	19	4	10	212	5	11
Jalarpet ...	48	37 38	884	1	11	312	14	9	571	3	2
Salem ...	31	22 52	707	13	6	153	7	0	554	6	6
Podanur ...	88	65 33	1,373	3	5	400	8	4	972	11	1
Renigunta ..	30	21 58	418	3	0	101	13	4	316	5	8
Cuddapah (Closed 1st May, 1893) ...	7	5 48	252	8	0	34	4	0	218	4	0
Gooty ...	33	32 05	710	5	10	191	11	7	518	10	3
Raichur ...	41	32 72	1,100	13	8	573	14	0	526	15	8
Railway School Library ...	...	...	60	0	0	...	...	...	60	0	0
TOTAL ...	420	330 89	7,780	5	11	2,400	9	4	5,379	12	7

a. The expenditure on the Perambur School includes the cost of the Gymnastic Instructors.

Madras Railway Provident Institution.

113. The following details are given in continuation of those contained in my report for the half-year ending 31st December, 1892:—

Number of Subscribers.

	On 31st December, 1892.	On 30th June, 1893.
Obligatory ...	3,045	3,000
Voluntary ...	112	107
TOTAL...	3,157	3,206

Amount at credit on 30th June, 1893.

	RS.	A.	P.
Obligatory ...	2,41,047	15	2
Voluntary ...	41,513	6	10
Bonus ..	20,675	11	8
Profit and Loss ...	1,751	14	11
Reserve Fund ...	1,239	0	0
TOTAL...	3,06,228	0	7

The above bonus has been included in the accounts of the half-year under review, and has since been paid to the credit of the Institution.

114. During the half-year no investment in Government or other securities has been made, but a sum of Rs. 59,810-5-10 was transferred to Government of India Special Funds account.

Staff.

115. The following changes have taken place in the Official staff of the Audit Office during the half-year now under review:—

Mr. J. Cramp, late Chief Auditor, retired from the Company's service on the 12th March, 1893, with a gratuity of 12 months' pay.

Mr F. Dunsterville was appointed Chief Auditor in succession to Mr. Cramp.

Mr. T. Wake was promoted from Second to First Assistant Auditor in place of Mr. Dunsterville.

Mr. A. Corben, Locomotive Accountant, was transferred to the Audit Department as Second Assistant Auditor on the promotion of Mr. Wake.

Mr. F. O'Sherman, who had been acting as General Storekeeper, was confirmed in that appointment.

Mr. J. Mitchell, Cashier, was promoted to Third Assistant Auditor on the transfer of Mr. O'Sherman.

Mr. W. J. Parr, who had been acting as Third Assistant, reverted to his own appointment of Fourth Assistant Auditor.

116. A list of the statements forwarded herewith is annexed.

Yours faithfully,

FRED. DUNSTERVILLE,

Chief Auditor.

MADRAS RAILWAY COMPANY,
TELEGRAPH ENGINEER'S OFFICE,
ARCONAM, 24th August 1893.

No. 294.

To

THE AGENT AND MANAGER,

Madras Railway.

REPORT FOR THE HALF-YEAR ENDING 30th JUNE 1893.

DEAR SIR,

I beg to submit my report for the half-year ending 30th June 1893.

Offices and Fittings.

A Morse Sounder was fixed at Patchur in connection with the Government line running to Krishnaghery.

The instruments, leads and fittings were removed from the old to the new building at Edakolam and Krishnarajapuram stations.

Practising Needle instruments were fixed in the Telegraph and Booking Offices at Madras, Rayapuram and Podanur for Probationers to practise with.

Semaphores.

Electric Starting Semaphores were fixed at Krishnapuram Station.

An Electric Repeater was fixed in the Telegraph Office at Olavakode in connection with the East Electric Semaphore, and a wire on the existing poles was erected from the office to the Semaphore.

In consequence of alterations made by the Engineering Department, the Electric Semaphore levers at the following stations were moved into new pits:—

Tirutani,	South.	Kamalapuram,	North.
Kodur,	{ North.	Yerraguntla,	South.
	{ South.		
Urampad,	{ North.	Tiruvallam,	{ East.
	{ South.		{ West.
		Gudiyatam,	{ East.
			{ West.

The Electric Semaphore levers at Arcot, Sholinghur and Samalpatti were grouped together at each station.

Line Work.

The Telegraph Posts at $1\frac{3}{4}$ to $1\frac{1}{2}$ miles, inclusive, were shifted back as the wires were in the way of a hut for the Station Master at Kalamala Trial Station, N. W. Line.

The Galvanized Iron Wire in use between Rayapuram and Monegar Choultry Gate, which had become very rusty owing to the action of the salt air, was replaced by Silicious Bronze wire.

The Telegraph Post at $1\frac{1}{4}$ mile was shifted and raised to allow the Engineering Department to lay a dead lay bye for steam cranes.

The Telegraph Lines at Jalarpet were diverted in consequence of alterations made there by the Engineering Department.

A severe thunder storm passed over Tirupur Station causing some damage to the Telegraph Lines, so that all communication, except the Block Circuits, was interrupted. Communication was restored at the times given below :—

No. 1.—Interrupted from 19-0 on the 8th to 8-40 on the 10th May 1893.

„ 2. „ „ 19-0 on the 8th to 7-10 on the 10th May 1893.

Copper Earth Plates were substituted for coils of Iron Wire at the following stations, as the latter form of "Earth" has not been found very satisfactory in certain localities :—

	No. of Earths.		No. of Earths.
Tirupatur	1	Viziamangalam	1
Samalpatti	1	Uttukulli	1
Kallavi	1	Tirupur	1
Morappur	1	Mangalam	1
Salem	2	Somanur	1
Perundurai	1	Sulur	1

Lightning Conductors.

Five Lightning Conductors were fixed to the new station building and goods shed at Katpadi.

The following are comparative statements of interruptions on the ordinary Telegraph Lines and Block Lines, also of failures of the working of Electric Starting Semaphores :—

Interruptions on Telegraph Lines.

	Interruptions caused by the neglect and carelessness of the Signallers.	Accidental interruptions.	Total.
Half-year ending 30th June 1893	29	40	69
„ „ 30th „ 1892.	8	42	50

Of the accidental interruptions—

7 were due to instrumental faults.
2 „ disconnection.
18 „ contact.

9 were due to earth.
4 „ lightning.

Interruptions in Block Working.

	Miles open.	Number of circuits.	Interruptions caused by the neglect and carelessness of the Signallers.	Accidental interruptions.	Total.
Half-year ending 30th June 1893	838	114	11	64	75
„ „ 30th „ 1892	796	100	9	64	73

Of the accidental interruptions—

20 were due to instrumental faults.
2 „ disconnection.
5 „ battery faults.

35 were due to lightning.
2 „ contact of wires.

Comparative Statement of percentage of Semaphore Failures for the half-years ending 30th June 1892 and 1893.

Particulars.	Percentage for the half-year ending 30th June 1893.	Percentage for the half-year ending 30th June 1892.
Due to station staff	0.11	0.15
Due to faults in apparatus caused by lightning and interference without the Inspector's knowledge	0.02	0.07
Due to other faults in apparatus	0.07	0.05
	0.20	0.27

Intercommunication.

The undermentioned new vehicles were fitted with Electrical intercommunication appliances at the Perambur Works :—

Brake Vans	11
Oil Tank Wagons... ..	4
Tank Engine	1
Covered Goods	10

Nine of the above mentioned Brake Vans were fitted with Helleisen's Patent Dry Cell Batteries.

The following statement shows the working of the Electrical intercommunication in trains :—

	Half-year ending 30th June 1893.	Half-year ending 30th June 1892.
Total mileage of fitted trains	1,221,349	1,163,904
Mileage of fitted trains with complete communication	1,214,101	1,157,696
Percentage of interruption	0.59	0.53

I enclose a list of cases in which Electrical intercommunication was used and trains stopped during the half-year.

Statements shewing the total cost of maintenance of Electric Telegraph and working of the Electric Clocks during the half-year are also enclosed.

Yours faithfully,

R. E. PIGOTT,

Ag. Telegraph Engineer.

List of cases in which Electrical Intercommunication was used and Trains stopped during the half-year ending 30th June 1893.

Date 1893.		Particulars taken from the Guards' Journals.
Fire.		
February ...	12	To extinguish fire in H. S. Wagon No. 597.
Do. ...	17	Do. do. Horse Box „ 48.
March ...	3	Do. do. O. G. Wagon „ 2465.
April ...	4	Do. do. F. O. G. do. „ 1909.
Safety of passengers and public property.		
June ...	13	Owing to one of the elephants loaded in H. S. wagon No. 2375 having opened the flap door by removing the pins which fasten it.
	28	Owing to Tarpaulin sheeted on O. G. Wagon No. 2081 trailing along the line.
Derangement in the Rolling Stock.		
January ...	31	Owing to brake van No. 121 running hot.
Interference.		
March ...	28	Owing to bell ringing on the Engine.
April ...	24	Do. do. do.

ARKONAM,
24th August 1893.

R. E. PIGOTT,
Ag. Telegraph Engineer.

Madras Railway Telegraph Department.

Summary of the working of Electric Clocks for the half-year ending 30th June 1893.

		January.	February.	March.	April.	May.	June.	Mean of Six Months.
Clock Failures.	Caused by circumstances beyond Signallers' control ... per cent.	0.43	0.00	8.87.	0.89	1.94	3.33	2.57
	Caused through the negligence of Signallers per cent.	0.00	0.00	0.00	1.55	0.00	0.00	0.26
Clock errors, 2 minutes and over... .. per cent.		0.00	0.00	0.00	0.00	0.00	0.22	0.04
Clock errors under 2 minutes but one minute and over per cent.		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clock errors under 1 minute per cent.		99.57	100.00	90.93	97.56	97.85	96.45	97.06
Clock stopped ... per cent.		0.00	0.00	0.20	0.00	0.21	0.00	0.07
		100.00	100.00	100.00	100.00	100.00	100.00	100.00

ARKONAM,
24th August 1893.

R. E. PIGOTT,
Ag. Telegraph Engineer.

MADRAS RAILWAY COMPANY,
MEDICAL OFFICER'S OFFICE,
RAYAPURAM, 4th October 1893.

No. 876.

To

THE AGENT AND MANAGER,

Madras Railway.

REPORT FOR THE HALF-YEAR ENDING 30TH JUNE 1893.

DEAR SIR,

I have the honour to submit my report upon the health and sanitary condition of the line for the half-year ending 30th June 1893.

During the period embraced in this report, the number of patients admitted to the sick list was 7,001 as against 7,169 during the corresponding period of 1892, showing a decrease of 168. The diminution would have been much greater had it not been that in the early months of this year Intermittent fever was extremely prevalent on the North West Line, and that almost exactly twice the number of men were admitted to the sick list during the six months ending June 1893, suffering from ague compared with the similar period of 1892.

Mortality:—It is highly satisfactory to be able to report that the mortality was unusually low, the number of deaths being four, including Inspector Boyne of the Engineer Department who died of fever in January last.

Cholera:—It is very gratifying that not a single case of Cholera was dealt with.

Small-pox:—There has been a slight increase in the number of Small-pox cases, 29 employes being admitted to the sick list as against 18 during a similar period in 1892. Of that number, 20 belonged to the Perambur Workshop.

Colour Blindness:—At the request of the Chief Engineer, I commenced an examination of all persons in his Department on both lines as regards their visual acuity, and colour perception, but more particularly with respect to the latter. And the examination is being gradually proceeded with at the various stations on the line.

Vaccination:—Due importance is still being given to this important work. A Vaccinator is permanently employed and all employes are vaccinated when entertained unless they can show evidences of very recent vaccination.

Branch Dispensary:—The new Dispensary in the compound of Central Station is being proceeded with and when completed will prove more convenient to the sick employes than the present undesirable one in Wall Tax Road.

Rayapuram Dispensary:—The store accommodation at this Dispensary is very meagre, and is quite inadequate for the efficient conduct of the business of this Department. It is to be hoped that an early opportunity will be taken to increase the accommodation and at the same time to provide the Vaccinator with a more comfortable room to carry on his work.

I have made the usual inspection of the lines and found every thing satisfactory.

Yours faithfully,

J. CURRIE,

Acting Medical Officer,

Madras Railway.

*Comparative Statement of Cases treated during the Half-years ending 30th June 1892
and 30th June 1893.*

Date.	Small-pox.	Measles.	Simple Fever.	Intermittent Fever.	Remittent Fever.	Influenza.	Cholera.	Choleraic Diarrhoea.	Dysentery.	Diarrhoea.	Accident and other Diseases.	Total treated.
1892.												
January ...	...	1	113	170	...	...	...	...	34	39	746	1,103
February...	5	1	146	135	...	3	1	...	35	36	857	1,210
March ...	4	3	136	166	...	42	2	...	31	44	869	1,207
April ...	5	2	121	89	...	29	2	...	38	55	796	1,137
May ...	2	...	182	94	...	26	1	...	52	84	814	1,253
June ...	2	...	152	102	...	17	1	...	26	44	814	1,158
Grand Total ...	18	7	850	756	...	117	7	...	216	302	4,896	7,169
1893.												
January ...	1	...	110	305	1	1	...	...	20	31	703	1,172
February ...	8	1	124	291	1	1	...	...	25	30	684	1,165
March ...	7	1	218	303	2	12	...	...	29	32	748	1,417.
April ...	10	3	226	259	...	12	...	...	31	38	606	1,245
May ...	3	1	160	161	...	2	...	...	26	33	635	1,021
June ...	...	1	106	140	...	...	...	...	27	51	656	981
Grand Total ...	29	7	944	1,524	4	28	...	...	158	215	4,092	7,001

MADRAS RAILWAY.

Return of Vaccination for the Half-year ending 30th June 1893.

Number Vaccinated.	Traffic Department.				Locomotive Department.				Medical Department.				Audit Department.				General Stores Department.			
	Sex.				Sex.				Sex.				Sex.				Sex.			
	Male.		Children.		Male.		Children.		Male.		Children.		Male.		Children.		Male.		Children.	
76 ...	...	54	...	...	...	9	1	2	6	1	...	...	...	1	...	...	2	...	...	...

(A. & M. I.)

No 7735

909

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 13th October 1893.

From

The Agent and Manager.

M. A. E.

To

The Consulting Engineer for Railways.

Madras

SIR,

I have the honour to forward -
herewith 40 copies of the reports of each of the
undermentioned Officers for the Half year ended
the 30th June 1893.

Agent & Manager
Chief Engineer
Loco: Superintendent
Traffic Manager
Chief Auditor
Telegraph Engineer
Medical Officer.

I have the honour to be,
Sir,

Your most obedient servant,

M. A. E.
Agent & Manager.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,

Madras, *23rd October* 1893.

*Reports by the Heads of Departments
of the Madras Railway for the half-year
ended the 30th June 1893*

No. *295*

2 OCT 93

SUBMITTED.

*For the information of Government
the transmission of 6 copies
to the Govt of India*

*Ammanath
Govt.*

Subject.

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No. 1324 R 81 Nov
PUBLIC WORKS DEPT.
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Indorsement from the
Comptroller for Railways } H.E. No 295 of 23rd Oct 1893.

Ld 24-10-93

Encl. 1.

2-NOV. 93

Ordered that six
copies of the Reports by
Heads of Departments of the
Madras Railway for the
half year ended 30th
June 1893, be forwarded
to the Government of India
29 Oct

To the Agent & undersigned by the
Examiner of Reports.
H.E. No 1325 R 81 29 Oct 93.
To the Secy to the Govt. of India
P. W. Dept.

Sir, I am directed to
forward for the information
of the Govt. of India six
copies of the Reports by the
Heads of Departments of the
Railways.

... railway for the half
year ended 30th June 1893.

Fre

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2/11/93

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No. 1324-25 Regd. 1st Nov 93.

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