Public Works (~~190~~ 1896) Department.

RAILWAYS.

G.O., No. 203 R

DATED 5-3-~~190~~ 1896 .

Includes 796R 25.11.95

Despatch Abstract.]

Halfyearly Inspection Report, S. I. Ry for the halfyear ended 30. 6. 1895

Informing the Government of India that steps are being taken by the Agent to remedy the defects pointed out in the ——

Indexed

BACK PAPERS.

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

FURTHER PAPERS.

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

26TH AUGUST 1895, No. 550 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

Report of inspection of the South Indian Railway for the half-year ended 30th June 1895.

ORDER—dated 26th August 1895, No. 550 R., Public Works.

Communicated to the Agent, South Indian Railway, for information and necessary action.

2. A copy of these Proceedings will be forwarded for the information of the Government of India.

[Here enter No. 551 R., dated 26th August 1895.]

(True Extract.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Agent, South Indian Railway.
" Local and Municipal Department.

Exd. T. K. Narayana Aiyangar.
Spare Copies

RAILWAY.

Govt. of {1895} Madras.

PUBLIC WORKS.

Dated August, 26th.

Recd. *Encl.*

G.O., 26th Aug. 1895, No. 550 R.

AUGUST.

Inspection Report

The — of the South Indian Railway for the half-year ended the 30th June 1895, communicated to the Agent, for information and necessary action, and a copy of the Proceedings ordered to be forwarded to the Government of India.

SOUTH INDIAN RAILWAY (INCLUDING THE MAYAVARAM-MUTTUPET AND VILLUPURAM-DHARMAVARAM RAILWAYS).

(METRE GAUGE.)

	MILES.
Total mileage open for traffic	1,096.

Inspection report by C. T. R. SCOVELL, Esq., Government Inspector of Railways, Madras, for the half-year ended 30th June 1895.

The inspection was carried out between the 8th and 21st July 1895. The Acting Chief Engineer, Superintending Physician and Deputy Locomotive Superintendent were present throughout the inspection; the Resident Engineers and Assistant Traffic Managers accompanied the party over their respective divisions.

2. *General.*—The line is generally well kept up. The road was in good running order throughout. The restriction on speed on the Villupuram-Guntakal and Máyavaram-Muttupet Railways may be removed.

FEEDER ROADS.

3. *Serndanur station* (*South Arcot*), *mile* 104.—This new station, which will be ready for opening in about two months' time, requires a feeder road.

4. *Máyavaram-Muttupet Railway.*—The main road which runs more or less parallel with the railway at a distance varying up to 1½ miles is metalled for 11 miles north and 16 miles south of Tiruválúr. All the stations on this railway are either situated on this main road or are accommodated by unmetalled cross-roads which, except in the rainy season, give good enough access; but the cross-road to Tirunattiyattangudi, which has only just been finished, is very rough.

The railway approach roads are metalled and though not in first-class order are better than the district roads.

5. *Chavadipalayam* (*E*)., (*Coimbatore district*).—Although in November 1894 the President, District Board, was asked to construct a feeder road to this station, nothing has yet been done.

6. *Tirukkóyilúr* (*South Arcot district*).—A causeway across the Ponnaiyár river is required to enable the feeder road, which has recently been finished, to be of much practical use.

7. *Chellankuppan tank, mile* 133 *G.* (*South Arcot district*).—This tank, which burst in 1891, has just been repaired, but the calingula has not been extended.

BRIDGES AND CULVERTS.

8. *Adyar bridge.*—A crack has recently been discovered in one of the vertical struts; it is probably an old one and will at present be carefully watched.

9. *Mile* 63/0 *A.* (*Chingleput district*).—An 18 inch culvert has recently been rebuilt, but the culvert which runs under the public road opposite to it requires to be cleaned out or an Irish bridge substituted.

10. *Mile* 54/2 *A.*—No further movement has occurred; the struts have been strengthened with rails.

11. *Pálár bridge.*—The overhead bracing has been completed.

12. *Mile* 92/3.—A tension link in the 2nd bay of this 120 feet girder is cracked along the fibre for some 2 feet. Although probably an old crack, the Chief Engineer will consider the best way of supporting it.

13. *Ponnaiyár bridge.*—Road over this bridge is very rough, but sound; it will however be cross-sleepered soon. Brackets to fit under the rail-bearers between them and the bottom flange of the cross-girder are under supply. These brackets will be fitted to all rail-bearers in bridges of this type (100 feet spans).

14. *Coleroon bridge.*—Road very rough over this bridge, but sound.

15. *Devanudee bridge.*—7 × 30 feet girders much corroded. One span has been sleeper-stacked. New girders are under order.

16. The causeway at mile 252 is making good progress. The work is of excellent quality.

17. *Mile* 290/16 *G.*—A new 15 feet girder bridge was inspected and passed. The girders have been strengthened up to the standard fixed by the Government of India.

18. The loose bed stones noticed in the last inspection report have been recemented.

19. The longitudinal timbers have been replaced by cross-sleepers on the bridge at 442 T; arrangements are being made for similar substitution on the bridge at 433 T., as well as for the additional rolled cross-beams recommended for girders on the Dharmavaram section in the last report.

Girder-strengthening.

20. All the bridges included in the list given in the last inspection report have now been completed.

A new estimate is about to be submitted for strengthening 23 spans of 10 feet and 9 spans of 12 feet girders; two of these latter have already been completed and one is in hand.

The cross-timber road to replace the weak cross-girders of 30, 50 and 70 feet spans has been arranged for. Three bridges have so far been completed.

21. Karúr bridge (Erode branch) might be made available for road traffic with pecuniary advantage to the company.

Ballast and Permanent Way.

22. The new 50 lb. road has now been laid through to Tuticorin with the exception of 35 miles (390–425). Contracts have been let for the supply of the necessary material to complete the main line.

23. The section Cuddalore-Máyavaram requires attention.

24. The Máyavaram-Muttupet line is now in very good order, particularly between Máyavaram and Tiruválúr.

25. Between Tirumangalam and Virudupatti, the banks are low in places and road is a bit below standard.

Steel Sleepers, Villupuram-Guntakal Railway.

26. Three sleepers were taken out of the road at 110/10 G. and examined: two were much corroded on lugs and rail seat, one completely worn through. The keys had entirely lost their original shape. The sleepers on being weighed were found to have lost about 9 per cent. At mile 229/8–10 the road was opened and examined. The steel keys were found to have much corroded, and the corrosion of the keys and lugs had infected the adjacent rail web and flanges. Four sleepers were removed and weighed 260 lb. as against their original weight of 280 lb. Keys were found to be much corroded in Kurabalakóta yard though, between this station and Chinna Tippasamudram, they were found to be in good order.

27. Where practicable, all permanent-way gangs imprest stores have been removed either to stations or to level-crossings where gatemen are stationed.

28. Ballast short in places between Pákala and Tirupati.

29. Banks require making up in places between Tanjore and Ayyampéttai, mile 152, and on the Máyavaram-Muttupet Railway generally.

30. An experiment was made at Chingleput to see whether the 20 feet locking bars were long enough to prevent a bogie vehicle, with 23′ 3″ between the two inside pair of wheels being split. It was found impossible to reverse the points until the whole train had passed clear. This experiment was repeated at Ayyalúr with the same result.

31. *Catch sidings.*—A safety siding off the main line has been recently put in at Ayyalúr. The points are weighted, interlocked with a disc signal and provided with a Stoney and Winter's locking bar. Two rail lengths might be removed at the end of the siding and the others sanded over.

32. Generally, I am of opinion that, at roadside stations, these safety sidings taking off the main line are a source of danger rather than a protection. The pointsman may lose his head at the last moment and turn the train into the siding, or a train out of control, unable to pull up at the station might be turned in and possibly destroyed, whereas it might have run on harmlessly and pulled up on the main line. When it is remembered that it is proposed to provide some 35 such sidings, I think some less dangerous design must be adopted. The primary object of safety sidings is to prevent run-away vehicles or those blown out of sidings from fouling the main line, and this will be adequately served without danger to passing trains by taking the siding off the loop, or merely by the insertion of a switch. By prohibiting hand-shunting over main line points and where the station itself is on a grade possibly ordering trains going in the up-hill direction, which require to do shunting work, to bring up on the loop, the safety siding will be equally efficient as if it were on the main line.

33. *Kurabalakóta.*—The catch siding here was found locked. The bolt and cottar were ordered to be removed. Three rail lengths should be taken up at the end of the siding and the remaining rails sanded.

This siding has been reduced to the level since last inspection.

Level-crossings.

34. The level-crossing gates between Saidapet and Beach should, in view of the number of trains that run or will shortly be run, be provided with a semaphore signal interlocked with the gate. Those crossings situated within distant signals should be provided with a simple arrangement whereby the distant signal could not be pulled off until the gates are closed.

35. The same arrangement should be adopted at the first level-crossing west of Trichinopoly junction.

36. Electric bells to warn gatemen of approaching trains should be fitted to the level-crossings between Egmore and Saidapet.

Fencing.

37. The aloe fencing is generally full of gaps and considering the large number of cattle accidents which occur on the so-called fenced line, I think wire fencing should be gradually substituted.

38. *Signals* require painting at Negapatam and at certain other stations, particularly on the Villupuram-Guntakal branch.

39. At some stations between Cuddalore and Máyavaram, many of the distant signal wire connections were in a very neglected state.

Stations and Buildings.

40. *Madras.*—The Municipality of Madras having increased the water-rate, it is proposed to revive the scheme for obtaining water from the Cooum.

41. *Tindivanam.*—The sanitary condition of the compound leaves much to be desired.

42. *Villupuram.*—Many complaints have appeared in the Native Press concerning the 3rd-class accommodation at this station. With the exception that a species of tick infests the sand-flooring of the waiting sheds, I think these complaints are vexatious and unreasonable. I understand that it is the intention of the management to pave the waiting sheds at important stations by degrees. This is a work which should certainly be put in hand for the comfort of native passengers.

43. *Chidambaram.*—Two additional ticket windows are being provided. Temporary latrine accommodation in the compound is desirable during festival time.

44. *Tanjore.*—The scheme for the remodelling of this station is in hand.

45. *Pandi (M.M. Railway).*—Goods platform still incomplete.

46. *Nannilam (M.M. Railway).*—There is a good passenger traffic; the station requires extending.

47. *Kumbakónam.*—Sanitary condition of compound very bad. Permanent latrines with access from waiting shed required.

The refreshment room might be closed and re-opened at Máyavaram.

48. *Madura.*—An extra room for the accommodation of European travellers might be added.

49. *Egmore, Trichinopoly, Madura and Negapatam.*—Additional staff quarters necessary. Estimates are under consideration.

50. A new crossing station wanted between Elamanur and Trichinopoly Fort, mile 257, where there is a large village would be the best site.

51. *Kulittalai.*—A waiting room for 1st and 2nd class passengers has been built.

52. *Tiruvannámalai (Villupuram-Guntakal Railway).*—Compound requires cleaning of prickly-pear.

53. *Vellore.*—Should a local service be again started between Vellore and Kátpádi, a trial station should be opened at mile 193/4 the nearest point to Vellore town.

54. *Pákala.*—The staff quarters at Pákala were generally in a very untidy state. The recently-sanctioned staff quarters are well in hand.

55. *Kálahasti.*—Additional goods-shed accommodation seems to be required.

Workshops and Rolling-stock.

56. *Egmore.*—Sheds are required for the protection of carriages from the weather. I think the four lines of rails parallel to the platform should be roofed over.

57. The locomotive shed extension at *Villupuram* is so far advanced that it had better be finished. This is one of the locomotive stations which would be more or less abandoned, if the Consulting Engineer's scheme for the revision of the locomotive districts were accepted. The proposal to discuss this scheme has, after considerable delay, been referred to the Company's Board for orders.

58. *Negapatam.*—The usual demand for workshop extension was made, but the attention of the Locomotive Superintendent is invited to the Senior Government Inspector's remarks in the last inspection report.

59. The locomotives are, as usual, in 1st class order.

60. Now that the vacuum brake is in use on some sections, it is hoped that the through timing of trains may be reduced by using the brake to draw up trains more quickly.

61. The brake is not used south of Madura because, it is stated, there are not sufficient engines fitted with it to work the trains, but this being so, the reason for working O-class engines on the Erode and Negapatam branches is not apparent.

62. More attention should be paid to the cleaning of carriages. At Trichinopoly junction I noticed a 3rd-class bogie carriage, which had been detached early in the morning and was then about to be attached to the night mail train to Madras, in a very filthy state.

63. The Singarenni coal required for the northern section of the South Indian Railway (some 20,000 tons annually) is delivered in Southern Mahratta wagons at Dharmavaram junction. Here the coal is unloaded, carried some distance and stacked; its cubic contents is then measured and it is reloaded this time into South Indian Railway trucks. It is then railed some 140 miles to Pákala where it is again stacked.

The reasons for these unnecessary operations at Dharmavaram which involve a waste of Rs. 1,700 alone for the reloading at Dharmavaram, to say nothing of the wastage of coal and cost of restacking at Pákala, are stated to be—

(1) that it affords the only means of measurement;

(2) even if other means of measurement were adopted, it would still be cheaper to tranship the coal out of Southern Mahratta Railway into South Indian Railway wagons to save the demurrage charges on foreign stock.

With regard to (1) it seems that the Locomotive Department were unaware that there is a weigh bridge at Dharmavaram; and with regard to (2) it would appear, if it is cheaper to tranship a commodity like coal which is easily pulverized and wasted, that no advantage is gained by having a continuity of gauge.

Train Service.

64. The time has now arrived for a complete revision of the time-tables. A deputation waited on me at Panruti station complaining of inadequate service, and similar complaints have been received from time to time from other stations. Passengers are frequently left behind for want of room in the trains, and at all times the trains are crowded.

65. No attempt has been made to improve the service so as to form a direct through connection with Colombo, suggested in the last report.

Faster mail trains and additional passenger trains appear necessary to deal with the public acquirements of all classes.

The Madras local service is inadequate; the present office train is too slow in consequence of its being too long.

Traffic.

66. *Kívalúr (N).*—Besides a few pointsmen, the stationmaster had no assistance. He was supposed to practically simultaneously issue tickets, obtain and give line-clears without even the assistance of a signaller, to personally inspect the facing points, to attend to the trains and to collect tickets. This station has an average traffic of 480 passengers in and out daily.

67. *Tiruverumbúr.* — The inspection special and No. 2 mixed, which crossed at this station, were both started on false line-clear tickets. At this station the books were seized, after the starting of both trains; and on examination were found to have no entries whatever.

68. *Tanjore.*—The only machine at this important station for weighing passenger luggage and parcels would not weigh to within ½ a cwt.

69. In spite of the overwork which station masters have to contend with, they are obliged to rule numerous columns in many of their account and return books. Some of the books are not machine-numbered, thereby rendering fraud easier.

70. The milk supplied to me at *Villupuram* refreshment room consisted half of water. In the interest of European passengers, I think such an important article of diet should receive attention. The refreshment contractors should be obliged to keep cows and supply unadulterated milk.

71. The fare list placed in the 3rd-class waiting shed at *Manganallur* (Máyavaram-Muttupet Railway) was illegible, while those at stations on the Villupuram-Pákala section and at some stations in the Nellore branch did not give the fares to stations on the Dharmavaram branch.

72. The inspection train and 14–30 goods, which crossed at *Putalapattu* (Villupuram-Guntakul Railway), were both started on false line-clear tickets. The books were seized before they had been filled up. The stationmasters generally are unable

to do all the duties expected of them at train times within the time allowed. Were the system advocated by me in paragraph 12 (*b*) of the South Indian Railway inspection report for the half-year ending 31st December 1893 adopted, much of the necessity for starting trains on false line-clears would be removed.

73. The work of Sáttúr station, which deals with some 20,000 rupees' worth of traffic monthly, is done by one stationmaster on Rs. 30 and one clerk on Rs. 15. Koilpatti station has a stationmaster on Rs. 20, although the station deals with some 14,000 rupees' worth of traffic per month, whereas some other unimportant stations earning only Rs. 600 or 700 have stationmasters on Rs. 25. Generally there appears to be a want of system and no encouragement for good men to remain.

74. Sufficient attention is not given to helping 3rd-class passengers to find room in crowded trains.

75. Nothing has yet been done towards providing attractive refreshment stalls for natives as suggested by the Senior Government Inspector in the last report.

76. There would seem to be no reason why No. 14 mail should be allowed 26 min. on a down grade between Ambaturai and Dindigul, while the corresponding train in the reverse direction is allowed 19.

77. The following are lines in which economies might be effected without detracting from the general efficiency of the service.

Trailing points need not be held for the passage of trains.

At many stations the points might be *grouped* and three or four points worked by one pointsman. This has been adopted with success on the Madras Railway.

Under-guards might be abolished on many of the mixed branch trains, and in vacuum brake mail trains a travelling parcels clerk could take the under-guard's place, thereby releasing the chief guard from duties which now prevent his attending to passengers. A superior class of man, time expired European Soldiers for preference, is required for mail train head guards.

The substitution of a tonnage for a vehicular load of trains. The Southern Mahratta Railway with the same class locomotives and on the same ruling gradient run their trains at practically the same speed with 26 loads or 210 tons as against 19 loads on the South Indian Railway.

78. There seems to be an impression that no train is allowed to exceed 25 miles an hour. That trains frequently reach 35 miles an hour is of course known to everybody connected with the railway. The limit of speed, as laid down by the Government of India, is 40 miles an hour. With the vacuum brake, new bogie rolling-stock and the 50 lb. permanent way, I certainly think the mail trains may be officially allowed to run at over 25 miles an hour. That this increase of speed is required is evident from the present inability of the night mails to and from Madras to make a connection with Colombo steamers at Tuticorin, and that natives appreciate fast travelling is evinced by the crowded state of these night trains.

79. The authorized speed over facing points for non-stopping trains is 4 miles an hour. The Government of India limit is 10 miles an hour, and this should be sanctioned at once so as to avoid the necessity for the Company's officials having to connive at the habitual breakage of their existing rule.

80. The ballast siding points referred to in the last report had not been removed, although it has been decided in subsequent correspondence that they should be removed until signallers and signal cabins had been provided. The following sidings were open on the date of inspection, but have since been closed:—Tiruválúr, Rettamalai and S. Kollatur.

81. It would tend to keep the railway in touch with the trading public and their requirements, if the Traffic officials made periodical visits to important trade centres as is done on the Madras Railway.

82. The necessity for inter-communication between passengers and the staff in charge of the train having been admitted, it is hoped that a suitable system will shortly be adopted.

(Signed) C. T. R. SCOVELL,
Government Inspector.

3rd August 1895.

Notes by Senior Government Inspector.

Paragraph 26.—I advise a trial should be made of a cast iron sleeper for the F.F. rails to replace the steel sleepers which will shortly require renewal.

Paragraphs 31 *to* 33.—Safety siding should as a rule be laid off the loop and hand shunting over the main line prohibited—this matter is being taken up with the Agent.

Paragraphs 67 *and* 72.—*False line-clear tickets.*—This is most serious and I request the Agent will at once investigate and report on these cases and, if the stationmasters are unable to perform their duties, assistance must at once be given them.

Paragraph 60—*Vacuum brakes.*—There are 20 engines and 66 bogie coaches fitted, and it is reasonable to expect that they should be used as suggested.

Paragraph 80.—An explanation is also required about the ballast sidings which had not yet been removed or protected.

The earnest attention of the Traffic and Locomotive Departments is invited to the report generally which is not satisfactory in regard to the working of their departments.

(Signed) F. R. UPCOTT,
Senior Inspector.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

Report of Inspection of the South Indian Railway for the half-year ended the 31st December 1893.

No. 9.

Endorsement by the Consulting Engineer for Railways, dated Madras, 12th March 1894.

Submitted for the information of Government and for the submission to the Government of India of 35 copies of the report with the orders passed thereon.

ORDER—dated 13th March 1894, No. 157 R., Public Works.

The report of inspection of the South Indian Railway will be communicated to the Agent for information and necessary action.

2. A copy of these Proceedings will be forwarded for the information of the Government of India.

[Here enter No. 158 R., dated 13th March 1894.]

(True Extract.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Agent, South Indian Railway, through the
Consulting Engineer for Railways.

ENDORSEMENT—dated 13th March 1894, No. 158 R., Public Works.

Forwarded.

(By Order.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

Exd. C. A. Munisawmy.
Spare Copies

RAILWAY.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated March, 13th.

Recd.

Encl.

G.O., 13th Mar. 1894, Nos. 157, 158 R.

MARCH.

Inspection Report

Forwarding a copy of Proceedings passing orders on the — of the South Indian Railway for the half-year ended the 31st December 1893.

SOUTH INDIAN RAILWAY (METRE GAUGE).

Total mileage open for traffic including Pondicherry Branch—1,051 *miles.*

Inspection Report by Mr. C. T. R. Scovell, Government Inspector of Railways, Madras, for the half-year ending 31st December 1893.

The inspection of the Villupuram-Guntakal section was made between the 11th and 13th January and that of the main line between the 23rd January and 1st February 1894. The Agent, heads of departments, or their deputies and the district officers accompanied the inspection party.

Main Line Section and Branches.

2. **Banks and cuttings.**—Generally the banks and cuttings have been maintained up to their original section; necessary repairs have been carried out as required. The breaches which occurred near Trichinopoly and Gudur and on which a special report has been submitted have now been thoroughly repaired and consolidated.

The bank formation at mile 36/0 to 10, Arkonam branch, and at 268 and 293/1-11 miles, Erode branch, is low and requires making up.

3. **Bridges and culverts.**—The girders were examined as carefully as circumstances permitted with a view of finding out if there were any signs of overstrain caused by the O class engines. In every case they appeared to be in good order, no sign whatever of overstrain being perceptible. They are well painted or tarred as the case may be. The timbers are in good condition.

(*a*) 9–30 *feet bridge, mile* 71, *Arkonam Branch.*—A wire fence 6 feet from centre line forms with the bridge hand rail a foot-way for the public across this bridge and is a great convenience in times of flood. Under the circumstances the infringement might be permitted; a few of the foot-path planks appeared to be rotten.

(*b*) *Six feet girder bridge, mile* 36/6.—North abutment badly cracked; should, I think, be under-pinned.

(*c*) *Pálár bridge, mile* 43.—In No. 1 span a longitudinal crack about 6 inches long was discovered between the fibres of one of the bars of the bottom boom when the bridge was being repainted. It appeared before the O class engines commenced running and is being carefully watched.

(*d*) The overhead bracing which infringes standard dimensions noticed in the last inspection report has been raised on the Tondayar bridge. Arrangements are in hand for raising it on other bridges and providing it where required.

(*e*) 17–100 *feet girder bridge, mile* 105.—Some of the cross girders have unnecessary holes in their top flanges which might with advantage be filled up.

(*f*) Examined the girders of the 10–20 feet girder bridge at miles 219/9 which are theoretically very weak. No sign of overstrain. As a precautionary measure sleeper cribs have been erected under this type of girder wherever they occur.

(*g*) In the last inspection report it was noticed that the road is not in the centre of the cross girders on the Erode branch. The Chief Engineer explains that it was decided at the time of the conversion of the gauge, in consultation with the then Consulting Engineer, to leave the line thus.

(*h*) *Arch bridge at mile* 278/3.—Slopes require to be pitched.

(*i*) The question of strengthening the weak cross girders of the Whipple Murphy trusses is one which must be taken up at once. No definite plan has yet been decided upon pending the suggestion of the company's Consulting Engineer Sir G. Bruce.

(*j*) The minor points referred to in the last inspection report have, unless otherwise stated, been attended to.

4. **Ballast.**—The line is fully ballasted throughout, but appears deficient in the neighbourhood of the 50 lb. renewals owing to the new pot sleepers requiring more ballast than the wooden.

5. **Permanent-way.**—The main line road is generally in excellent running order except as might be expected close behind the 50 lb. renewals.

The section between miles 130 and 145 was rough, the rails evidently not being level transversely.

The 41 lb. road between Tinnevelly and mile 376 was in good order and the running very smooth.

(*a*) The Stoney locking bars which are provided at Egmore and Chingleput require to be lengthened to suit the new bogie stock.

(*b*) Some point hand signal lamp posts on the Madras-Chingleput section infringe standard dimensions.

(*c*) The 50 lb. road has been laid from Madras Beach to mile 340 and also between 342 and 368, 374 and 376, 426 and 444 (Tuticorin).

(*d*) On the northern division the cast iron pot sleepers, of which there are 7 pairs to the 24 foot rail, have, except on curves where all are so provided, 4 pairs connected with tie bars and 3 without. This arrangement has been found to give trouble when lifting and packing and at all renewals tie bars are now provided to every pair of pots.

(*e*) The speed of trains over facing points is 10 miles an hour for stopping trains and 5 miles an hour for non-stopping trains. The means of locking facing points was carefully examined. The new pattern in which the bolt passes through a radial arm and the point rod is perhaps the best and the one in more general use. A movement of $\frac{1}{16}$ to $\frac{3}{8}$ of an inch was usual. The type known as Armstrong's patent A_1 which is used on the old broad gauge section, is dangerous without a bolt through the switch and stock rails.

I am of opinion that the bolt and tapering cotter with the hasp hole close up to the bolt should gradually be substituted for the other systems.

6. **Level crossings.**—The gate lodges between Egmore and Guindy should be provided with electric bell communication to warn gate-keepers of approaching trains; not only would this conduce to the greater safety and convenience of the public, but it would minimize the necessity for the amount of whistling which now goes on and which has become a public nuisance.

(*a*) Four gate lodges on the Arkonam-Conjeeveram section infringe present standard dimensions.

(*b*) A deputation waited on the Agent at mile 262/13, Negapatam branch, asking that the footpath crossing at this place might be widened into a cart crossing. The Agent promised to comply conditionally on the villagers paying the cost of the alteration.

(*c*) A number of level crossings on the Negapatam branch and the southern division have very steep approaches. I understand the villagers resent giving up their land for the purpose of lengthening the grade. It is for them to meet the railway half-way if they want better facilities.

7. **Fencing.**—The aloe fence on the northern division is in good order, though for many miles it has had to be wired. South of Madura, however, the aloes do not thrive and give continual trouble. If it is desired that the line should be proof against cattle trespass, I am of opinion that the aloes should be gradually replaced with wire. It is instructive to note that in the quarter ending September 1893, out of 52 cases of cattle trespass, 42 occurred on the fenced line and 10 on the unfenced, the respective lengths being 654 and 388 miles and the average number of trains in both directions being about as 12 : 4.

8. **Rolling-stock.**—(*a*) Recently 20 O class 4 coupled passenger engines have been received from England, whose axle weights exceed the maximum prescribed by the Government of India. They have, in consequence of the weak cross girders above referred to, been restricted to certain section of the line where there are no weak cross girders. These engines will draw on the mail trains 26 ordinary vehicles at 25 miles an hour.

(*b*) A complete train of 40 feet bogie stock has been turned out of the shops and is now running. This train is fitted with the vacuum brake, which, however, in consequence of the O class engines not running regularly, is not in use. These carriages have been fitted up with every modern improvement and the complaints against uncomfortable accommodation on the South Indian Railway must soon be a thing of the past.

In consequence of the recent additions to locomotive and carriage stock, the Locomotive Superintendent has been able to withdraw the older stock more frequently for examination and repairs with satisfactory results.

(*c*) Some of the new carriages have been painted instead of varnished, the invariable practice hitherto. This I understand is by way of experiment.

(*d*) The condition generally of all the rolling stock on this railway has, of late, been much improved.

9. **Workshops.**—*Locomotive shops at Negapatam.*—On the date of the inspection these shops were very crowded with work. This possibly is only temporary owing to large amount of 40 bogie stock in course of erection, but in consequence of the continued extension of the railway more accommodation is necessary. The boiler shop, foundry and coppersmiths' shops were particularly noticed as being too small for the work. The coppersmiths' shop especially should, I think, be increased if it is intended that it should carry out the work expected of it.

(*a*) *Engineering shops at Trichinopoly.*—The scope of these workshops has recently been considerably reduced, but it is not intended at present to entirely abolish them.

10. **Stations.**—The stations are generally clean and neatly kept.

(*a*) *Egmore.*—The space between the lines to the north of platform might be paved and roofed to give facilities for washing and for the protection of the stock from the weather.

(*b*) Some complaints have been made by passengers of the want of a proper platform at Perambair. This was possibly justified as the platform was then low, but recently has been finished off to rail level. The station is a trial one and no more than a rail-level platform seems required.

(*c*) *Mile* 104/3.—A deputation waited on the Agent to ask for a station. A station here would be useful as a crossing station, but the Local Fund Board should arrange with the Agent about the construction of a feeder road, should the latter decide to provide a station.

(*d*) *Mile* 116/7.—A deputation waited on me at this mileage asking for a trial station and guaranteeing Rs. 5 a day towards the expenses of the staff. This question has been brought up before and refused on the ground that inasmuch as the distance to the adjacent stations is $5\frac{1}{4}$ and 3 miles respectively, it would only have the effect of withdrawing a portion of the traffic which now finds its way to those stations and moreover it is undesirable to increase the number of stations for the mail to stop at. I agree.

(*e*) *Station, mile* 171.—The platform at this and at some other similar stations requires to be made up to rail-level.

(*f*) A plentiful supply of good water for locomotive purposes has been found at Kadambur and Tataparai. It is no longer necessary to run water tanks on trains on this section as heretofore.

(*g*) Judging by the entries in the remark books, the refreshment rooms appear to have given satisfaction to the public. I have, however, reason to believe that, when the butler thinks a passenger is going to make a complaint, the book is not forthcoming. A Dado and some geometrical border on the now plain whitewashed walls would make the rooms appear more comfortable. The crockery, furniture, &c., which is supplied by the contractors, is of the most wretched description.

(*h*) The following stations situated near steep gradients require safety switches or catch sidings—Ayyalúr, Vadamadurai and Ammayanáyakkanúr on the main line and Kaniyambadi, Ramapuram, Mangalampeta, Pulicherla, Kalikerri, Váyalpád, Kurabalakota, Nullacheruvu and Putalapattu on the Villupuram-Guntakal Railway. This at first sight appears a large order, but I am of opinion that a weighted switch interlocked with a small semaphore placed near the end of the loop and kept normally closed to the main line is all that is required. This arrangement would effectually prevent the catch siding being used as a lay-bye line and would moreover avoid additional facing points in the main line. It is of course understood that no hand shunting is permitted at the dangerous end of these station yards.

11. **Staff quarters**—*Negapatam.*—Many of the European covenanted fitters are obliged to live in native houses in the bazaars for want of proper accommodation.

The hospital at Negapatam is very deficient in accommodation and is moreover a very dull and gloomy building.

12. **General.**—There is a rule in the Company's working time book that the stationmaster must personally see the facing points locked. The loops are now being lengthened and some of the facing points are about 1,200 feet from the station building. It must take the stationmaster 10 minutes to walk there and back to the neglect of his numerous other duties at train time. Had a dead end siding long enough to take a train been laid in extension of the existing loop, the facing points would not need to have been moved, the accommodation would have been the same as with the 2,000 feet loops, and the stationmaster could reasonably be expected to carry out the rule above referred to.

(*b*) During an enquiry into a case of avoided collision which recently occurred on this railway, it was found that, with the system of signalling trains in vogue, insufficient time is allowed at crossing stations between the arrival and departure of trains from and to the same section. The best way of overcoming this difficulty is to authorize the stationmaster at the crossing station to ask for line clear before the section is clear in the following form as is done, I believe, on some railways in the north of India. "On arrival of——train from your station will line be clear for——train now ready to start?" With the poorly paid class of stationmaster employed, I think the time has arrived for the introduction on the more crowded sections of this railway of the electric tablet or other improved system for working trains on single line.

(*c*) Booking theoretical as against actual time seems to be a practice ingrained in the subordinate traffic and locomotive running staff. In this respect the train message books are one mass of fabrication and it can only be stopped by the vigilance of the Company's officers and severe punishments when detected.

(*d*) Many of the Company's traffic subordinates, such as ticket collectors, have no uniform or badge of office. The public would be quite justified in refusing to show their tickets to such individuals.

(*e*) Under certain conditions, it would be possible for the driver of a South Indian Railway train to mistake the home signal at Erode for the Madras Railway signal; one arm might be removed and the signal shifted to the points.

(*f*) It is under consideration to run night trains on the Erode branch in response to numerous petitions which have been received from time to time. There is, however, very little through traffic between the Madras Railway and stations beyond Trichinopoly and moreover some of the short distance local traffic will doubtless be lost.

(*g*) A deputation waited on the Agent at Sikkil station and complained that the fare thence to Negapatam, a distance of three miles, was nine pies. The Agent promised to look into the matter.

(*h*) Nothing has yet been done as regards keeping properly fitted break-down trains ready for an emergency.

13. **Stores.**—The general stores at Negapatam were particularly neatly and methodically kept, but I would suggest that the ticket printing department be transferred either to the Traffic Manager or Chief Auditor.

A large quantity of construction plant has been accumulated at Trichinopoly amongst which are several girders mostly of weak design; to this must be added the

plant which is now lying at Dharmavaram and which was used for the construction of the Guntakal-Hindupur Railway now transferred to the Southern Mahratta Railway.

Villupuram-Dharmavaram Section.

14. The banks and cuttings are in good order. The banks between Villupuram and Nellore may be assumed to have become quite consolidated.

15. The shaken bed stones referred to in last report have been reset with cement and no further movement is perceptible. Some timbers which required it have been retarred. Missing and loose rivets have been replaced.

7–40 *feet bridge at mile* 179.—Timbers cracking badly; I understand arrangements are in hand for renewing the worst. The opportunity might be taken to relay the road which is very rough over this bridge.

4–40 *feet bridge at mile* 339/3.—Some timbers badly cracked.

20 *feet bridge at mile* 307/10.—North abutment has come forward during the recent floods. It has been strutted and will be under-pinned.

The wooden bed plates of the Madras Railway overbridge at Rénigunta have been sheeted with iron to minimise the risk from sparks.

16. **Permanent-way.**—The following notes were made in reference to the deterioration of the steel sleepers. It would appear that some local chemical influence must have been at work to account for the rapid decay referred to in the last inspection report.

(*a*) (1) Opened and examined road at 353/4—Dharmavaram section—stone ballast, no signs of any moorum having ever been spread. Sleepers clean and free from rust.

(2) Opened and examined road at 342/15—moorum ballast on moorum bank. After removal of cake from the underside, the sleepers were found to be quite free from rust.

(3) Opened and examined road at 339/10—moorum ballast with stone covering. Sleepers in good condition.

(4) Opened and examined road at mile 330/11—Nellore branch—stone ballast. Sleepers laid 6 years ago. Slight traces of rust on underside; in good condition.

(5) Opened and examined road at mile 241/14—Nellore branch—sand ballast, free from rust.

(*b*) The road over many of the long 40 feet girder bridges in the Gúdúr valley would be all the better for relevelling.

(*c*) The line between Villupuram and Tirupati may now be said to have quite settled down and was in very good order, as also was the section between Pákala and Mangalampeta, between this and Dharmavaram the road is still a bit rough.

17. **Ballast.**—Some 40 miles of moorum ballast still remain between Pákala and Dharmavaram; this is being gradually replaced by stone.

18. **Stations and Buildings.**—(*a*) A new station is in course of construction at mile 104 and is about half completed.

(*b*) A new station has been opened at Nullacheruvu, mile 339-D, chiefly to break the long run between Tanakallu and Kadiri.

(*c*) The flat roofs of the stations and staff quarters on the Nellore section give much trouble from leaking.

19. The breaches on the Nellore branch have been dealt with in a separate report. They have now been thoroughly repaired.

MADRAS,
6th February 1894.

(Signed) C. T. R. SCOVELL,
Government Inspector of Railways.

NOTE BY SENIOR GOVERNMENT INSPECTOR OF RAILWAYS.

The action of the Locomotive department in putting on locomotives, which infringe the Government standards, without giving any notice to the Railway Engineers, or the Consulting Engineer's department, does not appear to have received sufficient notice.

As the Government Inspector is made under rule 72 of Circular 7 of 1892 responsible that the bridges on the section over which engines are to work are of sufficient strength, I think the matter should not be allowed to rest here.

It will take about 6 or 7 months to put the girders in order to take these engines, during which time they have to remain idle or doing half work; the outcome being much waste of money resulting from want of touch between departments.

The revision of the working of the line-clear system demands the close attention of the Traffic department.

Sufficient time must be allowed to carry out the rules which the company lay down, or the rules should be altered.

The condition of the steel sleepers at Chittoor should be reported on.

It appears that more careful attention has been paid to the renewals of the steel sleepers in the half-year under notice as the returns show only 6 sleepers renewed during January—June 1893, and 155 during July—December 1893.

(Signed) F. R. UPCOTT,
Senior Govt. Inspector of Railways, Madras.

27th February 1894.

APPENDIX A.

Renewals of Permanent-way (excluding sidings).

	Taken out of line.	Laid on line.
Rails—		
Iron, 68 lb	169	169
„ 40 „	7,661	*Nil.*
Steel, 50 „	7	5,405
„ 41 „	686	605
Sleepers—		
Pine	28,549	6,456
Pingadu	9,917	2,264
Teak	151	15
C.I. pot, 68 lb	41	41
„ „ 50 „	32	29,437
„ „ 40 „	24	24
Steel transverse	155	151
Denham and Opperts	161	161

APPENDIX B.

Renewals, Repairs of Rolling-stock, Negapatam Shops.

	Received.	Turned out.	Under going and awaiting repairs.
Coaching vehicles	277	262	161
Goods „	1,180	1,252	225

All communications should be addressed to the Secretary.

No. 1333 R.C.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

To

The Joint Secretary to the Government of Madras,

Public Works Department, Railway Branch.

Simla, the 28th October 1895.

Sir,

With reference to the inspection report of the South Indian railway for the half year ending 30th June 1895, forwarded under your Memorandum No. 551 R dated 26th August 1895 I am directed to request that the Agent's explanation regarding the points noticed in paragraphs 67, 72, and 80 of the report may be furnished for the information of the Government of India.

I have the honour to be,

Sir,

Your most obedient servant,

F. A. Talbot

Under Secretary.

Documents accompanying :-

Nil.

A.R.K.

P. W. CURRENT No. 8509

Recd: 4.11.95

P.W.C. No. 8509

No 3513/5.11.95 Copy forwarded to the Agent S. I. Railway for favor of compliance.

FRU 4/11 S.R.

D2 CMM 4/Nov

No. 1018

South Indian Railway Co., Ld.

AGENT'S OFFICE,

TRICHINOPOLY, 18th November 1895.

From

THE AGENT,

SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS.

Sir,

1 In answer to the reference in G.O. No. 550 R. of 26th August 1895, I have the honor to furnish the following explanations from the Acting Traffic Manager:-

2 Para 67 of Inspection report for Half year ending 30 June 1895.

"The Inspection Special and No 2 "mixed which crossed at this Station (Trirverambur) "were both Started on false line Clear tickets"

3 "I am pleased to be able to assure "you that nothing so serious occurred. Line Clears were "duly asked for and obtained for these trains but the "Signaller did not write down the message in the "Train Signal book as he received it from the instru- "ment and the Station master did not fill in his por- "tions of the form."

4 "The Station master says he was "anxious to get the Inspection Special away sharp, it "arrived at 12.45 and left at 12.47 and thought it would "do if he wrote up his Signal message form after the "train had gone."

"It

From

The Agent,
South Indian Railway,
Trichinopoly,

To

The Consulting Engineer for
Railways,
Madras.

Dated } 189 .
Received }

No.

Enclosure.

"It would not have taken the Signal-
"ler or the Station master a minute to have done what
"was required of them in this Case, and they have
"been punished for their Carelessness."

"On taking over charge of this department
"on April 20th last one of the first things I did was to
"put a check upon this kind of irregularity."

Vide Circular No. G. 603 of 30th April 1895.

"'Duties of Inspectors:— When at a station they
"should inspect the train Signal message books and report if
"any of the forms have been prepared in anticipation
"or have not been entered up at all, or if any other
"irregularity in the use of the book exists."

Para 72. The Train was not Started on a false line Clear.

"My remarks on para 67 Supra apply to
"this Case:

"It is true the Station masters are unable
"to do the duties expected of them at train times within
"the time allowed at all times, but they have been told
"they will be excused if a little delay necessarily takes
"place in receiving and despatching trains."

"The time taken up at Stations over
"and above the short time allowed is no doubt made
"up between Stations, and the introduction of the
"Vacuum brake, which now saves a little time in
"pulling up at Stations must be taken too as a set
"off against unavoidable delays at Stations on ac-
"count at times, of extra traffic or crossing of trains."

"For this reason I do not think we
should take what time is saved by the Vacuum
brake for accelerating the mail trains. That can be
ne by taking off Sectional Stoppages and running
cal trains over the Section instead and connecting
h the mail trains at certain points."

"In this para the Government
Inspector

"Inspector remarks:-"

"'Were the system advocated by me
"in para 12 (b) of the South Indian inspection report
"'for the half-year ending 31st December 1893 adopted,
"'much of the necessity for starting trains on false
"'line clears would be removed'."

Copy forwarded 157 R (13) 13/3/94

"The last line has evidently been
"written under a misapprehension as to what is a false
"line clear."

(14) "The following is an instance of
"what I consider a false line clear to be:-

"A Signaller says he has received
"a line clear message for a certain train when no
"such message has been transmitted and a train
"has accordingly been started on a false line clear
"ticket."

(15) "This is a serious irregularity,
"and differs altogether from the cases mentioned
"in paras 67 and 72 as in those instances a line
"clear message had been asked for and obtained."

(16) With reference to para 80 the
Acting Chief Engineer writes:-

"I regret there should have been
"a misunderstanding on this subject, my understand-
"ing of the Consulting Engineer's letter was that the
"working of these sidings might be continued on the
"rules, sanctioned by the Consulting Engineer when
"these sidings were constructed, but that signals and
"signal boxes must be provided. The points have all
"since been taken up."

I have the honor to be
Sir
Your most obedient Servant

Daudlogan
Acting Agent

not have
consider a minute to have done

C. No. 4948
Rec'd. 2/11/95

FORM No. 7

9

MADRAS, 25 June 1895

To

Agent, S. I. R.

No. 3772 Reply No. , dated

SIR,

1 ~~The~~ With ref to your letter no 1018 dated the 18th June 95 I have the honor to offer the following remarks—

2 For convenience of reference I have numbered the paragraphs of your letter 1 to 16

Reminders.

3. Para 3 of your letter — It is stated in your book of instructions for working trains that all train signal messages must be fully written up before the despatch of any train. As the Station Master failed to carry out these instructions I have quite as good grounds for assuming that ~~the~~ Station Master did not obtain line clear, as your Traffic Manager has for asserting that he did.

As you are well aware, In all cases of alleged collisions the ~~books at~~ one station are usually completely written up while those at the other station are blank and this is at once received as evidence that the latter station did not get line clear.

Subject.

4. Para 5. The fact "that it would not have taken the Station Master a minute to have done"

was required of him" is all the more reason why he should have done it – vide Traffic Manager's Circular No J. 428 of 3 March 94.

Para 6. Admits that "a check was put upon this kind of irregularity". In my opinion the seriousness of the offence is thereby aggravated.

Para 8." Para 72. The train was not started on a false line clear". ~~If this is a quotation from the Inspection report, the word "not" is a clerical interpolation~~

The grounds for this assertion are not obvious. The remarks of my para 3 apply to this case.

Paras 10 & 11 – I regret I cannot agree with the principle expressed in these paragraphs. If the trains were able to keep time before the introduction of the vacuum brake, it is obvious that they must now ~~have~~, other things being equal, be working time.

If the stoppage time is insufficient it should be increased & if the running time is too much it should be decreased

moreover if the station & train staff know that any extra delay at stations can be made up between stations the staff generally are likely to become slack

Para 14. I quite ~~agree~~ agree with this definition of a false line clear ~~[illegible]~~ and for this very reason the last line of para 72 of the Inspection report was not written under a misapprehension so surmised in para 13.

P.T.O.

9. Para 15 is evidently written on the assumption that line clear was asked for; an assumption, probably founded on the Station Masters statements, which I see no grounds for accepting.

CMH. 22/Nov.

ER.

ER 22/11

10. A copy of your letter ~~under reply~~ has been sent to the Supt. of Media in reply to their letter No 1333 R.C. dated Simla 28 Oct-95 a copy of which was forwarded to you under my endorsement No 3513 5.11.95.

CMH

JMH 14/11

Bf-

No. 796. R. dated 25.11.95
Wales India

In reply to your 1333 RC of 28 October I am directed to forward the explanation called for therein -

2. I am to say it is the opinion of the Inspecting officer that the admission of the Traffic Department that line clears are often written up in the message books after the departure of the train, does not prove that telegraphic messages have been interchanged -

3 The matter is still under reference -

JMH 22/11

D. to see

CMH. 22/11.

Documents accom.?
Copy of letter from A
No. 1018 of 18.11.95

Fair desp.d in R. office
On 25.11.95

B/-

No. 796. R. dated 25.11.95

W 27/11 28/11

Extract from B's letter to Board No 460 3
18/12/95

x x x

x x x

Starting of trains on false line clear tickets

Whether these trains were started with, or without, obtaining "line clear" can never be ascertained; but it is quite obvious that the Station masters were remiss in their duties in not completing the prescribed Entries. I have no doubt that this practice of filling up the line clear tickets after the trains have left is of daily occurrence, and the only remedy is the introduction of a better System.

x x x x

Extract from B's letter to A No 164 of 31. 1. 96

Inspection Report H. y. Ended 30. 6. 95

The Board have had under Consideration the reports of the various heads of departments upon the comments made by the Deputy Consulting Engineer for Rys: on his inspection of the Railway in July last, together with your own Views, as Explained in letter No 460.

x x x x

All communications should be addressed to the Secretary.

No. 147 R.T.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY TRAFFIC.

To

The Joint Secretary to the Government of Madras,
Public Works Department, Railway Branch.

Calcutta, the 20th February 1896.

Sir,

With reference to your letter No. 796 R., dated the 25th November 1895, forwarding the explanation called for in the Government of India letter No. 1333 R.C., dated the 28th October 1895, regarding the points noticed in paragraphs 67,72 and 80 of the Inspection Report of the South Indian railway for the half year ending 30th June 1895, I am directed to enquire how the matter now stands in connection with " line clears ".

I have the honour to be,
Sir,
Your most obedient servant.

W Bonham Carter
Captain R.E.
Assistant Secretary.

Documents accompanying.
Nil.

T. Co. 1963

Recd: 26.2-7

500—6-4-95.

R. Form No. 13.

No. 203 R

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

Calcutta.

Madras, the 5th March 1896.

SIR,

With reference to your letter No. 147 R.T. dated 20th February 1896, I am directed to say that the last half yearly Inspection Report of the South Indian Railway deals with the irregularities therein noticed and the Inspection showed that the measures taken by the traffic staff to allow more time for the line clear reports to be wired and entered into the books has stopped the practice, also that the proposals of the Agent to at once raise the status of the Subordinate traffic staff and to bring into use after trial an automatic electric tablet system has the approval of the Government Inspector that they will effectually safe guard the travelling public. The Inspection Report referred to will follow.

I have the honor to be,

Sir,

Your Most Obedient Servant,

Joint Secretary to Government, P.W.D.
Railway Branch.

Documents accompanying:-

Nil.

Fair despatch

No. 203 R. dated 5/3/96

2263 18/3

No. 310 R.T.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

All communications should be addressed to the Secretary.

RAILWAY TRAFFIC.

To

The Joint Secretary to the Government of Madras,
Public Works Department, Railway Branch.

Simla, the 2nd May 1896.

Sir,

I am directed to acknowledge the receipt of your letter No. 203 R., dated the 5th March 1896, furnishing further particulars as to the irregularities noticed in the Inspection Report of the South Indian Railway for the half-year ending 30th June 1895.

2. In reply, I am to state, as regards the proposal of the Agent to introduce on that line, after trial, an automatic electric tablet system, that the Government of India have no objection to experiments being made with Winter's Block instruments between two stations, but, before such expensive arrangements are introduced at all stations, it should be fully considered whether they are really required for a railway with such light traffic as there is on most parts of the South Indian Railway.

3. I am to observe that on most parts of the line all that appears to be necessary is more efficient working of existing appliances.

I have the honour to be,
Sir,
Your most obedient servant.

Offg. Under Secretary.

Documents accompanying:-

Nil.

Refer A & Calls what steps have been taken in the matter — referred in Insp. Report for 1/2 of 1895 para 2

in connection with this see new time table underlining mail trains 12/5

A. W. CURRENT No. 4355

Recd: 11-5-96

SOUTH INDIAN RAILWAY (INCLUDING THE MAYAVARAM-MUTTUPET AND VILLUPURAM-DHARMAVARAM RAILWAYS).

METRE GAUGE.

Total Mileage open for traffic, 1,096 miles.

INSPECTION report by Mr. F. D. FOWLER, Government Inspector of Railways, Madras, for the half-year ending 31st December 1895.

The inspection was carried out between the 21st January and the 3rd February 1896. The Agent and Heads of Departments were present throughout the inspection, and the Resident Engineers and Assistant Traffic Managers accompanied the party over their respective divisions.

2. **General.**—The line is well kept and the road in good running order; rough places were noticed in mile 348, Dharmavaram section, mile 302, Nellore branch, and the length between Old and New Cuddalore. The following remarks apply to comments under heads "Traffic" and "Train service" in the inspection report for half-year ending June 1895.

Paragraphs 66, 69 *and* 73.—The Agent has submitted to his board proposals for improving the status of the subordinate traffic staff, of which the following are the leading features:—

(1) Compulsory retirement at a fixed age.
(2) A system of grading and a scale of salaries to ensure a more even flow of promotion.
(3) Service registers to be kept for each employé.
(4) European Stationmasters for the more important stations.
(5) A system of training and examination.
(6) A better system of supervision by the superior staff.
(7) An increase of the minimum pay of assistant stationmasters from Rs. 15 to Rs. 17-8-0 and of stationmasters from Rs. 20 to Rs. 25.

Paragraphs 67 *and* 72.—The line-clear and train register books were examined at a number of stations and were found to be well kept. The line is worked on the absolute block system and the rules for train-working do not require any alteration; the laxity noticed in the previous report is due to the inefficiency of the staff which it is hoped will be remedied by the measures specified in the previous paragraph. It is proposed to make a trial between two stations, of Winter's patent electric block instrument, which is designed to make the issue of a false line-clear impossible. If after two months' working it is found satisfactory, application will be made to the Board to introduce this instrument over the whole system.

Paragraph 68.—Only twelve stations have weigh bridges, four of which weigh up to ten tons. Weigh-bridges should be erected at other stations which do a large goods traffic such as Erode, Dindigul, Tanjore, Virudupatti and Tiruvannámalai. One Native fitter is at present employed to overlook all the weigh-bridges and weighing machines on the line.

Paragraph 71.—At many stations no fare lists were exhibited in the third-class waiting sheds. It was explained that the fares had recently been revised and new lists were under issue. This should have been foreseen and all stations supplied before the revised rules came into force.

Paragraph 75.—Designs and estimates for fruit and refreshment stalls are being got out; trial might also be made of refreshment rooms with cook-rooms attached for third-class passengers.

Paragraph 77—*Grouping of points.*—This should be given a trial at some large station, say, Trichinopoly, and the system extended if the increased economy and safety of working is found to warrant the expense.

Paragraph 78.—The Board have sanctioned the proposal to raise the speed of mail trains from 25 to 35 miles an hour.

Paragraph 79.—The Government limit of ten miles an hour over facing points should be adopted in the general and subsidiary rules now under revision.

Paragraph 81.—It is proposed to increase the number of traffic canvassers.

Paragraph 82.—A train has been fitted up with electrical communication between driver, guard and the female carriages; sanction has since been received from the Board to adopt Winters' electric communication on all trains.

Paragraph 64.—Endeavours are being made to improve the service between Madras and Colombo; there are several difficulties to overcome. The post office require two hours for sorting mails and parcels at Tuticorin; two hours are taken up by the six miles journey from the pier to the steamer in the steam launch, while the steamers take 16 hours from Tuticorin harbour to Colombo. The latter are small vessels of 500 tons and the requirements of the better class of passengers are entirely subordinated to coolies and cattle. There is little doubt that a good passenger traffic could be got if the journey between the Indian port and Colombo were improved, but as long as Tuticorin remains the port of departure, little can be done. It is much to be wished that the Madura-Pámban line (a paying branch in itself) may be constructed; if the Manaar-Colombo line were simultaneously taken in hand and laid to the metre or mixed gauge a wagon ferry could be established across the Straits and the journey performed without delay or discomfort. The Pámban pass could be crossed by a 200′ span swing bridge and piers could be made on the north and south sides of Pámban and Manaar islands so that the ferry steamers could run in smooth water in both monsoons.

Paragraph 64.—The mail trains on the main line appears to be always full and often crowded; additional passenger trains seem to be necessary.

3. The lighting of carriages and stations leaves much to be desired. The pattern of roof lamp supplied is a good one, but they do not appear to be kept in good repair; the whole stock should be overhauled and put into thorough repair; the reflectors should be silver plated.

The introduction of gas-lighting is under consideration, but it is not proposed to alter the present system of lighting until the rival merits of Pintsch's gas and Acetyline shall be established.

There are no tarpaulins on the line; a supply should be obtained for protecting goods at small stations which have no goods-sheds.

The rules fixing the loads to be taken by different classes of engines on different sections are inadequate; no proportions seem to be fixed between loaded and empty wagons. The system adopted on the Southern Mahratta Railway of a vehicle and tonnage limit should be adopted to ensure that the trains are made up as nearly as possible to the gross tonnage within the vehicle limit.

A good deal of routine work such as bridge painting is done departmentally which would, I think, be better done by contract. If a contractor for each district were arranged for, who would execute all work in the district at fixed schedule rates, it would relieve the engineering staff from a good deal of work and give them more time for inspection.

It has been suggested that the line could be more economically worked by altering the location of the locomotive staff. The proposal is to centralise at Villupuram, Madura and Pakala and to place drivers in charge at Tanjore, Máyavaram,

Trichinopoly, Madras, Tuticorin. Although this scheme will involve the abandonment of some staff quarters already built and the erection of others, it is thought that the economy in working will outweigh these considerations.

4. **Bridges and Culverts.**—The girders which required strengthening, a list of which was given in the inspection report for the half-year ending 31st December 1894, have now been completed.

Adyar Bridge.—Several of the ties are much bent.

Pallur Bridge, Mile 43.—The painting is badly done; a few rivets in the horizontal bracing require renewal and also some of the planks of the side walk; stiffening pieces between rail-bearer and cross girder have been indented for.

Tondayar Bridge, 4/100′ *at* 84/9.—Overhead bracing is being erected.

Gingee Bridge, 18/30′ *at* 85/13.—Some pieces of planking require renewal.

Vikravandi Bridge at 93/3.—A new link has been added to replace the cracked one in the bottom boom. The bridge should be repainted. The overhead bracing is to be raised.

Ponniar Bridge at 105/1.—Overhead bracing is in course of erection.

Gadilam Bridge, 15/100′ *at* 123/14. The gauge is half an inch slack in places and tight in others; it should be re-gauged throughout.

Devannaddi 8/30′ *at Negapatam.*—The girders have been condemned and new ones are to be erected at once.

Vennar Bridge, 9/30′ *at* 238/2.—The longitudinals are near the end of their life and should be replaced by cross sleepers.

The diversion for a causeway $\frac{3}{4}$ mile long at mile $\frac{251}{16}$ to $\frac{252}{15}$ is ready for opening as soon as signals are put up; the other causeway at $\frac{251}{7}$ to $\frac{251}{15}$ has been completed during the half year. The causeway on the Erode branch is delayed pending negociations with the Municipality who wish to join in the public road with the causeway.

Vaigai Bridge 15/70′ *at mile* 324/10.—The longitudinals are to be replaced by cross-sleepers during current half year.

Bridge of six spans of 30′ *at* 361/15.—Longitudinals to be replaced by cross-sleepers during current half year; some of the packing pieces are loose.

There is no regular system of painting; bridges are repainted when they are said to require it. It would be better to have a regular programme so that each bridge should be repainted once in so many years; this might well be done by contract.

5. **Fencing.**—There is no fencing at the Beach station; this should be put up.

Wire-fencing should be gradually substituted for the aloe, as the latter dies out; it is neither efficient nor economical.

6. **Level-crossings.**—The gate at Egmore level-crossing should be fitted with a proper post and lock.

An overbridge at Egmore would be a great improvement and should be considered when getting out the design for a new station.

The gate of the level-crossing at mile $\frac{2}{16}$ which was broken in December last has not yet been replaced; this should be done at once.

An overbridge at Saidapet station would be an improvement, as the traffic is very heavy; it would be possible to arrange this by placing it to the west of the level-crossing and moving the facing points and siding further west also.

During the past year there have been seven cases of trains running through gates, three of which occurred in the vicinity of Madras. An estimate has been sanctioned for fitting all level-crossing gates between Mount Road and Madras with electric bells. The details of the arrangement are not yet settled. One proposal is that the stationmaster shall, on the departure of a train, ring up all the gatemen of the section, another that the train shall automatically close the gates to the road on its approach to the gate. The objection to the first is that the stationmaster may forget, and that the gates may be closed longer than necessary, and to the second that carts passing across would foul the gate. The best plan, I think, is to put treadle bars at each gate, and at the

trailing points of the station, connected with the gate next on the section, so that the train in passing over the treadle bar will ring up the next gate and no other. A semaphore signal should also be erected at each gate and so interlocked with it that it will only fall to caution when the gate is closed. The same arrangement should be fitted to all important level-crossings on the line.

7. **Ballast.**—The supply is sufficient, but many parts of the line are very dusty; endeavours should be made to provide a layer of broken stone over the sand ballast at least on the main line.

8. **Permanent-way.**—The re-laying of the main line with 50 lb. rails is nearly completed. Only twelve miles will remain to be done at the end of the official year.

A length of 5 miles between miles 252 and 257 laid experimentally with 40 lb. and cast iron pots has not been a success. Many of the fish plates have given way, and a few of the pots, consequent on the use of the heavier engines. This is to be renewed shortly with the 50 lb. rail.

The steel sleepers on the Nellore section are carefully watched, each defective sleeper being numbered and entered in a register. The number renewed during the half-year is 52, the renewals being heaviest between Agaram and Vellore (19), and between Renigunta and Nellore (19).

The renewals of rails and sleepers during the half-year have been as follows:—*Vide* Appendix.

9. **Station buildings, platforms, &c.**—The waiting rooms and refreshment rooms, particularly on the main line, are very dingy, if not dirty, and the furniture is often old and ricketty: matters might be improved at no great cost by colour-washing and stencilling the walls and by using paint of a less sombre colour on doors and windows. The floors might be matted and grass-mat punkahs used instead of the often dirty frill: refreshment rooms might be supplied with crockery and table equipment by the Railway Company instead of the miscellaneous assortment provided by the native contractors. Almirahs for stores should also be supplied by the Company.

The excessive use of tar inside and out of station buildings is deprecated and should be avoided in any new buildings.

Latrines.—There are a number of different types on the line—some simple enclosures floored with asphalt, some have compartments with sanded floor, some corrugated iron sheds and buckets. Some are flushed out with water and in others the dry-earth system is used. It may not be possible on the score of expense to adopt the same type all over the line, but the requirements of Government of India Circular No. 14-R. of 10th July 1895 should be acted up to and printed instructions drawn up by the Medical Officer should be issued to the staff regarding the cleansing of latrines and removal of night-soil. The latrines are mostly lighted and have distinguishing figures and lettering, but the figures are much too small as a rule.

Increased accommodation for first and second class European passengers at places frequented by tourists, such as Madura, Tanjore, Trichinopoly and Tuticorin, would probably tend to increase this class of traffic.

Very few of the stations have gardens, and of those that have them few are well kept. Annual prizes for the best-kept gardens would encourage stationmasters to make their stations look a little more pleasing.

The windows of lamp-rooms offer too great facilities for handing out oil to unauthorized recipients outside. It is difficult enough in any case to prevent this kind of pilfering, and every possible means should be taken to prevent it.

The notices and notice boards are often very untidy: it would be better to do away with the notice boards and cement over a portion of the wall for that purpose as is done on the Dharmavaram section.

The ticket windows at many stations are badly designed and there are a number of different types. One pattern should be selected and adopted at every station.

The telegraph wires at most stations are led into the buildings and along the walls to the instruments in a very untidy manner. Proper boards should be supplied.

Beach.—A joint station is proposed with a mixed gauge from Rayapuram to Fort station; sidings for goods should be provided for by acquiring land from the Port Trust between the railway and the foreshore and opportunity might be taken to widen the beach road

An untidy hut which is within standard running dimensions should be removed.

Egmore.—It has long been recognized that the existing station is quite inadequate for the requirements of passengers, and it appears impossible to make a satisfactory building by adding to the old structure. Plans should be got out for a new station building; opportunity might be taken to utilize the upper portion of the station as a railway hotel. An estimate which has been sanctioned by the Board for additional roofing over platform should be held in abeyance.

There is no retiring accommodation for first and second class passengers: pending the remodelling of the station a temporary structure should be erected; a convenient site would be the garden opposite the waiting room.

Pallur A.—There is no palisade fencing, there is plenty in store which could be utilized. The platform is of loose sand which should be replaced by rammed moorum.

Velleyampakam A.—The station building, an old temporary structure, might be replaced by a permanent one.

Chingleput.—The refreshment room should be extended: the third-class passenger shed is also much too small. The European passengers' latrine should have a name-board and a lamp.

There is only one gate for passengers entering and leaving the station and consequently much confusion at train times. Entrance and exit gates should be provided at a convenient distance from each other. A refreshment stall is much wanted here.

Tindivanam.—There is no accommodation for the third-class passenger traffic, which is considerable, except the verandahs of the station building. A shed should be provided.

Vikravándi.—The telegraph office should be plastered and white-washed.

Nellikuppam.—Accommodation for third-class passengers is required.

Cuddalore Old Town.—Floor of latrine out of repair.

Kille.—The station house is a dilapidated shed and should be replaced by a permanent building.

Máyavaram Junction.—Third-class accommodation very inadequate; a fruit stall much wanted.

Kumbakónam.—The parcel office is much too small and another ticket window is wanted.

Manganallur.—The latrine should have a partition wall and the dwarf wall is out of repair.

Tiruvallur.—The station house, an old building, is very dirty and too small. The party walls of the old building should be demolished and the building used as an extension of the third-class waiting shed, a new station building being erected near the overbridge.

Addiyakamangalam.—A new station is to be opened here; every thing is ready except the signals.

Sikkil.—A petition was presented by the inhabitants to remove the present station house to the goods shed to construct a latrine to lengthen the platform and to provide accommodation for third-class passengers. The requests are reasonable and should be acceded to as soon as may be convenient.

Kivalur.—A good station seems wanted here.

Negapatam.—All classes of passengers are badly provided for. There is no proper waiting room for first and second class passengers and in rainy weather, third-class travellers have to be content with the steps of the covered entrance; there is no refreshment room. The station is a large one, but the greater portion of it is taken up by railway offices. These should be accommodated elsewhere and proper accommodation given to all classes of passengers.

Koradacheri.—Rooms dirty and want white-washing.

Nídámangalam.—The passenger platform is too short and should be lengthened by moving the points outwards at either end.

Tanjore Junction.—An estimate amounting to Rs. 1,20,000 has been sanctioned by the Board for re-modelling this station. The platforms are too narrow and the accommodation for all classes of passengers quite inadequate. It is to be hoped that the work may be taken in hand very shortly. Sleeping accommodation over the station should be provided as Tanjore is a place much resorted to by tourists. The north end of the passenger platform should be ramped down to rail level.

Manappárai.—A waiting-room for first and second class is said to be wanted.

Dindigul.—A bath-room should be provided for the gentlemen's waiting room.

Madura.—The roof of the ladies' waiting room leaks and the walls are discoloured.

Tinnevelly.—The south end of the passenger platform should be ramped down to rail level.

Karúr.—The floors of the waiting-rooms should be paved with stone instead of brick which is worn out. A bath-room for the gentlemen's waiting-room should be added.

Dharmavaram.—The drivers' running-room has very inadequate accommodation. The building should be extended to give a larger bed-room and a bath-room; a separate latrine and cook-room should also be provided.

The guards' quarters are in an old and dilapidated construction building which should be removed and replaced by a permanent structure.

A very dirty and unsightly hut used by the South Indian Railway for porters' quarters should be removed.

Signals.—The distant signals have all been counterweighted to fly to danger on failure of any of the connections during the half year. They require, however, some further adjustment; it was noticed that in many cases the arm only fell a very little from the horizontal when the lever was pulled over so as to give an uncertain signal.

The distant signal beyond the Pallur bridge infringes standard dimensions and is to be moved to another site at a little distance from the line.

Madurántakam.—The distant signal must be moved further out in consequence of the increased length of siding.

Villupuram.—Arrangements for interlocking the signals are in progress and two signals have been erected.

Porto Novo.—The distant signal did not work properly.

Nannilam.—The red spectacle of the north distant signal was broken.

Tiruvallur.—The distant signal for the branch line should have a repeating signal worked by the same wire and the lever should be locked to danger by a padlock, the key of which should be kept by the stationmaster.

Nídámangalam.—The west distant signal was out of order.

Trichinopoly.—The home signal is arranged to be in a new position in the middle of the shed where it can be seen by the stationmaster from the platform. It would be better to shift the home signals to their respective facing points.

Many of the signals require re-painting.

10. **Station yards**—*Madurántakam.*—The extension of the through siding is finished.

Tiruvallur Junction.—The cross-over at the north end of the yard should be taken out and the lines re-arranged as agreed to at the inspection.

Tuticorin.—There are three-throw points at the entrance to the yard fitted with an indicator which shows green for main line and one siding and red for the other. This arrangement should be altered; the main line only should show a green light.

Kadpati.—The cross-over leading from main line to the mill and quarry siding should be removed; the main facing points should be moved up to near the gate

lodge and a new cross-over road laid from the quarry siding to the main line with trailing points inside the main facing points.

Trichinopoly.—The yard at Erode branch end requires re-modelling to give a better approach to the platforms and to prevent engines coming out of the engine shed from fouling the main lines when shunting. This can be effected by making the Erode branch siding into the Erode main line, cutting out the cross-over between Nos. 8 and 9 points, and a portion of the repair line, and leading the locomotive sidings into the present Erode main line which will then become a siding. For the present, until these alterations can be carried out, the stop signal near 26 points should be moved 60 feet towards the station. No. 36 points should be moved up towards 37, giving sufficient room to allow No. 31 to be used without fouling the Erode main line and a stop signal should be erected between the repair line and the Erode main line.

The fencing of the yard should be made continuous with steel palings.

Pákala.—Another siding is said to be wanted because one road is blocked by sick wagons; the difficulty could be overcome, I think, by putting in a cross-over giving sufficient room for locomotive requirements.

A siding from Gudur to the canal about eight miles long and a wharf for landing coal estimated at Rs. 1,23,000 are included in the programme of works to be executed in the current year. As far as the coal is concerned the necessity of the work appears to be doubtful as it will only be required until the Bezwada-Madras Railway is opened. Whether the salt Traffic alone is sufficient to justify its construction is questionable, but if it is built it should be of mixed gauge.

11. **Workshops, Engine Sheds and Stores.**—The turn-table at Cuddalore Old Town engine shed is out of use owing to the foundations having sunk; the engines are stabled at Villupuram while new foundations are being put in.

Negapatam Shops.—The boiler shop and the brass foundry are both too small and should be extended when funds are available.

General Stores.—The stores are neatly kept. A perusal of the last issued list of surplus stores seems to show that the orders of Government in circular No. 11 of 10th March 1893 are not worked to. The attention of the storekeeper should be called to paragraph II and V of the rules for open line stores. There are 87,009 (equal to 24 miles) chains for 68 lb B.G. rails and 10,000 pot sleepers fit for sidings and about 500 tons of broken pots in the store yard. These, I was informed, had been reserved for scrap and do not appear in the surplus stores list. Such a quantity is vastly in excess of the requirements of the foundry and the bulk of it should be disposed of.

12. **Rolling-stock.**—There have been two accidents to F class engines during the half-year; the first happened in December, the crank of the right hand driving wheel giving way; in the second, which occurred on the 6th February, the axle of the centre wheel broke inside the sleeve of the crank. The engine was built in 1890 and was just out of shops. I understand that the design of these steel axles is recognized as being defective and that a different pattern of axle has been recommended at the Locomotive Conference. Having in view the serious loss and danger that might result from such accidents, it is a question whether it would not be better to renew the axles of all these F class engines of which there are 40 on the line.

A refreshment saloon has been sanctioned by the Board, but is not needed at present. An inspection carriage for the Consulting Engineer was sanctioned in 1894, but has not yet been commenced.

There are twenty bogie low-sided wagons in stock which I understand are seldom used because sufficiently large consignments cannot be got. It would be better to convert them into high-sided trucks for coal traffic, or if that does not recommend itself to the Traffic department to effect an exchange with some other line.

13. **Approach roads and Feeder roads.**—The question of feeder roads is receiving special attention. The Pákala-Dharmavaram section is probably the worst off in

this respect and an officer has been specially deputed to report. The following table shows the requirements of this section:—

Station.	Name of village to which feeder road is required.	Distance in mile.	Remarks.
Mangalampet	Mangalampet	1½	President, North Arcot Board, unable to sanction two bridges estimated at Rs. 6,000.
Do.	Kathapet	1½	Local Board has no funds.
Pulicherla	Kullukum	4	Estimate forwarded by Local Board.
Do.	Rompicherla	5	No reply received from Local Board.
Kalikiri	Mahal	9	Local Board has sanctioned Rs. 1,800 for repair of road.
Do.	Kundur	7	Local Board has no funds.
Vayalpad	Samavarapati	6	President of Local Board has asked for an estimate.
Tummanagettu	Ghattu	5	Local Board has no funds.
Battulapuram	Kothakotta	7	Do. do.
Mulacalacheruvu	Mudukadupalli	5	Do. do.
Mudigallu	Pamadurti	5	Do. do.

The remaining sections should also be reported on by an officer specially deputed for this work and a complete report submitted to Government as soon as possible.

Pallur.—Feeder roads wanted to two large villages Panapákam and Trimulipur to the west of the line.

Serendanur.—A trial station. An approach road is wanted and connection with the main road at Venkatadri-Adóni. This should be made by the Local Fund Board.

Nannilam.—Approach road to goods shed in a very bad state; should be re-metalled at once.

Vettar.—Both approach roads in bad order.

Chavadepalayam.—The approach from the main road is very bad; the Local Fund Board should be addressed.

A feeder road is wanted to Mudakurichi 2½ miles and to Tirunattiyatangudi. There is no approach road to the station on the west.

MADRAS,
2nd March 1896.

(Signed) F. D. FOWLER,
Government Inspector.

Note by Senior Government Inspector.

The cases of issuing false line clear tickets at certain stations noticed in the last report have resulted in the adoption of a rule which recognizes that a stationmaster is justified in delaying any train while the line-clear books are properly written up and the proposals of the Agent to improve the status of the subordinate traffic staff and to use an electric block tablet instrument will have, I feel sure, the best results.

2. The other proposals are also satisfactory, but I understand the Locomotive Superintendent deprecates the increased speed and await further information on this point.

3. A general scheme for strengthening the remaining girders on this line should now be adopted. I request the Agent will take the opinion of the Board's Consulting Engineer and furnish a comprehensive plan at an early date.

4. The same officer should be consulted with regard to the renewal of the axles of the F class engines noted in paragraph 12.

A great many minor points are noted that require attention.

5. The Traffic department have evidently endeavoured and with success to put a stop to the irregularities noted in the last report.

6. The ballast sidings have all been protected or removed.

MADRAS,
4th March 1896.

(Signed) F. R. UPCOTT,
Senior Government Inspector.

APPENDIX.

STATEMENT showing the Renewals of Rails on the South Indian Railway including Pondicherry and Máyavaram-Muttupet Railways for the half-year ended the 31st December 1895.

Rails displaced.

Railway.	Iron.											Steel.									
	68 lb.			40·3 lb.				35·5 lb.				50 lb.						41 lb.			
	21′	18′	Cut L. ft.	24′	21′	18′	Cut L. ft.	19′	16½′	14′	Cut L. ft.	30′	27′	24′	21′	18′	Cut L. ft.	24′	21′	18′	Cut L. ft.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Main Line.																					
South Indian	127	1	..	4,303	1,028	48	4,068	..	..	..	..	..	..	17	..	2	..	542	53	17	..
Pondicherry	..	..	..	12	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Máyavaram-Muttupet ..	..	..	..	261	47	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	127	1	..	4,576	1,076	49	4,068	..	..	..	..	..	..	17	..	2	..	542	53	17	..
Sidings.																					
South Indian	8	1	..	155	236	26	..	..	..	..	..	..	..	4	1	..	..	..	..	..	..
Pondicherry	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Máyavaram-Muttupet ..	..	..	..	9	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8	1	..	166	243	26	..	..	..	..	..	..	..	4	1	..	..	..	..	..	..
Grand Total ..	135	2	..	4,742	1,319	75	4,068	..	..	..	..	..	..	21	1	2	..	542	53	17	..

Rails replaced.

Railway.	Iron.											Steel.									
	68 lb.			40·3 lb.				35·5 lb.				50 lb.						41 lb.			
	21′	18′	Cut L. ft.	24′	21′	18′	Cut L. ft.	19′	16½′	14′	Cut L. ft.	30′	27′	24′	21′	18′	Cut L. ft.	24′	21′	18′	Cut L. ft.
	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Main Line.																					
South Indian	121	8	..	173	129	22	..	..	..	..	..	3,738	30	37	..	18	708	444	564	2	..
Pondicherry	..	..	..	7	1	1	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..
Máyavaram-Muttupet ..	..	..	..	259	47	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
Total ..	121	8	..	439	177	23	..	..	..	..	..	3,738	30	37	..	18	708	451	564	2	..
Sidings.																					
South Indian	8	1	..	131	57	10	..	..	..	..	..	..	..	4	1	..	..	122	67	16	..
Pondicherry	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
Máyavaram-Muttupet ..	..	..	..	9	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8	1	..	140	64	10	..	..	..	..	..	..	..	4	1	..	..	124	67	16	..
Grand Total ..	129	9	..	579	241	33	..	..	..	..	..	3,738	30	41	1	18	708	575	631	18	..

Statement showing the Renewals of Sleepers on the South Indian Railway including Pondicherry and Máyavaram-Muttupet Railways for the half-year ended the 31st December 1895—*cont.*

Railway.	Sleepers displaced.									Sleepers replaced.								
	Creo-soted, 9′.	Creo-soted, 6′.	Pingadu.	Teak, of sizes.	Pot, 68 lb.	Pot, 50 lb	Pot, 40 lb.	Trans-verse steel sleepers.	D. and O. sleepers.	Creo-soted, 9′	Creo-soted, 6′.	Pingadu.	Teak, of sizes.	Pot, 68 lb.	Pot, 50 lb.	Pot, 40 lb.	Trans-verse steel sleepers.	D. and O. sleepers.
	NOS.	NOS.	NOS.	NOS.	PAIRS.	PAIRS.	PAIRS.	NOS.	PAIRS.	NOS.	NOS.	NOS.	NOS.	PAIRS.	PAIRS.	PAIRS.	NOS.	PAIRS.
Main Line.																		
South Indian	..	18,353	6,665	258	19	35	41	85	135	..	2,247	4,565	181	179	20,586	41	85	135
Pondicherry	..	160	..	..	..	..	..	..	..	..	..	160	..	..	..	..	..	..
Máyavaram-Muttupet	..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..
Total ..	..	18,513	6,667	258	19	35	41	85	135	..	2,247	4,727	181	179	20,586	41	85	135
Sidings.																		
South Indian	..	3,311	1,695	82	..	..	..	..	..	..	853	4,047	188	..	..	..	..	..
Pondicherry	..	50	..	..	..	..	..	..	..	..	..	50	..	..	..	..	..	..
Máyavaram-Muttupet	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	3,361	1,695	82	..	..	..	..	..	..	853	4,097	188	..	..	..	..	..
Grand Total ..	..	21,874	8,362	340	19	35	41	85	135	..	3,100	8,824	369	179	20,586	41	85	135

Form No. 7.

Dated 22nd May 1896.
MADRAS,

To

Agent, S. I. R.

No. 38/8 Reply No. 443 / 25.5 / 657, dated

Reminders.

Sir,

In forwarding herewith a copy of this Reply to 3/10 R.T. 2nd May 1896, from the Government of India, Railway Department, I have the honor to request that a reply may be furnished in the accompanying Return in the direction indicated in Para 2 of the Resolution Proceedings for the half-year ending 31st December 1895.

Despatched on 22/5/96.

Encs. 1.
Letter dated no. 310 R.T. 4/3/96.

Subject.

No. 38/O of 22nd May 1896.

No. 443

South Indian Railway Co., Ld.

AGENT'S OFFICE.

TRICHINOPOLY, 25th May 1896.

From

THE AGENT,

SOUTH INDIAN RAILWAY,

To

Offg:

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS.

Sir,

In reply to your letter No. 38/O dated 22nd May 1896. I have the honor to inform you that two of Winter's New block instruments have recently been obtained for trial. One instrument has been placed at Trichinopoly Junction, the other at Trivereumbur and it is hoped that they will be working in a few days. As you are aware we have for some time past been working Thompson and Webb's Electric Staff instrument between Trichinopoly Junction and Fort Stations and it is now my object to ascertain whether Winter's instrument, which is much the cheaper, is as reliable and easy to work as the Electric Staff apparatus.

2. When reporting the result of the trial between the two above named systems I will deal with the question raised by the Government of India in regard to the necessity for the introduction of a block instrument on this railway.

I have the honor to be
Sir
Your most obedient Servant
H.D.G. Shelley
Captn R.E.,
Agent

25/5

C. No. 2208
Recd. 27/5/96

No. 657

South Indian Railway Co., Ld.

AGENT'S OFFICE.

TRICHINOPOLY, 25th July 1896.

From

THE AGENT,

SOUTH INDIAN RAILWAY,

To

Offg:

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS.

Sir,

With reference to your letter No. 38/C and my letter No. 443, dated the 22nd and 25th of May respectively I have the honor to inform you Winter's Electric Block Instrument has been installed on, and has been working since, the 15th instant on the Section between Trichinopoly Junction and Trivvrambur Stations, and to forward herewith, for insertion in the Working Rules twelve Copies of the Acting Traffic Manager's Circular No. G 707 of the 15th idem embodying the rules for working the system.

I have the honor to be
Sir
Your most obedient Servant
S. D. G. Shelley
Captn R.E.,
Agent

12 Enclosures by book post.

From
THE AGENT,
SOUTH INDIAN RAILWAY,
Trichinopoly.

To
THE CONSULTING ENGINEER FOR
RAILWAYS,
Madras.

Dated
Received } 189
No.
ENCLOSURE.

0LS 158

3198
27/7/96
Encl 0/12

From

The Agent,

South Indian Railway,

Trichinopoly.

To

The Consulting Engineer for

Railways,

Madras.

Dated

Received } No. 189

Enclosure.

SOUTH INDIAN RAILWAY.

—:o:—

CIRCULAR NO. G. 707.

Instructions for working Winter's patent Block and automatic ticket issuing instrument, between TRICHINOPOLY J. and TIRUVERUMBUR stations which will be brought into force at noon on the 20TH JULY 1896.

1. The following Code Signals must be used :—

Attention	● Single beat, which must be repeated until attention is obtained.
Attention acknowledgment	● Single beat.
Is Line clear	● ●–● ●
Line is clear	●–● ●–●
Line is clear acknowledgment or departure Signal	● ● ●
Line is not clear	● ●–●–● ●
Line is not clear acknowledgment	● ●–●–● ●
Arrival Signal	●–● ●–● ●–●
Arrival Signal acknowledgment	●–● ●–● ●–●
Ballast or other train returning or cancelling Block	●–● ●–●–● ●–●
Ballast or other train returning or cancelling Block acknowledgment	●–● ●–●–● ●–●
Error Signal	● ● ● ● ● ● ● ●
Testing by Telegraph Inspector	● ● ● ●
Testing by Telegraph Inspector acknowledgment	● ● ● ●
Prolonged beat	

2. All signals must be clearly repeated until replied to, and no signal must be replied to until it is clearly understood. A signal is not considered complete until it is acknowledged and it must be recorded in the train register book when it is actually complete, but not before.

3. Suppose a train is ready to leave A for B—A having obtained B's attention on the Block instrument, will ask "Is Line clear" followed by a prolonged beat thus :— ● ●–● ● ▬

a. If. B can allow the train to come on, he will, while A is giving the prolonged beat press the button in front of the instrument with his left hand and with his right turn the switch handle from "off" to "on" and when A releases his plunger B will give the "Line is clear" signal followed by a prolonged beat thus :— ●–● ●–● ▬

b. While B is giving the prolonged beat, A will press the button in front of the instrument with his left hand and while keeping this pressed, pull out the ticket drawer with his right hand. When B releases his "plunger A will give the signal ● ● ● to intimate the starting of the train or the line is clear acknowledgment."

c. After filling up the entries in the Train Register book in the usual way, A will fill in the remarks column the number on the ticket issued, and B will enter in the remarks column the number indicated on the side of the instrument.

4. Both instruments will now show that a train is going from A to B.

5. The Line clear ticket, which has been drawn by the slide can now be dated, filled up for the particular train—that is, the number of the train and date entered on it—signed and given to the Driver according to the rules, or, for non stopping trains, by any convenient means such as being attached to a hoop, etc.

6. On the distant signal being lowered in the usual way as the train is sighted at B a treadle fixed to the rails beyond the outermost points is acted upon and as soon as the train has passed over the treadle and while the Semaphore is still at "Caution" the switch handle of the instrument at B, is released and can be pulled back, which should be done as soon as possible, but the "arrival signal" should not be given until it is ascertained that the train has arrived complete.

a. The semaphore should not be raised to danger until the switch handle has been brought over to "off" as otherwise the switch handle will be again locked.

7. B now gives the arrival signal followed by a prolonged beat thus:—
●–● ●–● ●–● ▬

8. The prolonged beat enables A to push in his ticket slide, keeping his button pressed while doing so, and he acknowledges B's arrival signal by giving a repetition of B's signal.

9. Both instruments will now indicate that the section is cleared.

a. Both the switch handle, and the slide should in every operation be moved as far as they will go.

10. In the event of a case arising where B is unable to bring his switch handle from "on" to "off" in the usual manner on the arrival of the train at B, in consequence of the distant semaphore being raised to danger too soon, or by failure of the arrival releasing apparatus the procedure should be as follows :—

a. On arrival of the train at B, B will telegraph to A "Switch handle failed to go to off" "Train arrived." A will reply "Understand Switch handle failed to go to off." B on receipt of this reply, will unlock the padlock at the side of his instrument and when ready will give ●–● ●–● ●–● to intimate to A that he is ready to receive the prolonged beat. A will then give a prolonged beat with his plunger, and B during this prolonged beat will press the button at the side of the instrument with his right hand and with his left remove the switch handle from "on" to "off." After this has been done and A's prolonged beat has ceased, B will give the arrival signal ●–● ●–● ●–● followed by a prolonged beat, which will allow A to push in his ticket slide. A after doing so and after B's current has ceased will acknowledge B's signal by repeating it.

11. Method of cancelling the block either for a train unable to proceed or for a Ballast or other train returning to the station from which it started.

12. Having blocked the line in the usual way the method of cancelling the block is as follows :—

A having first received the Line clear ticket back from the Driver and cancelled it by writing the word cancelled upon it and duly initialling it will call the attention of B, and after obtaining attention will give the signal ●–● ●–●–● ●–● to intimate that the train is unable to proceed or that the Ballast or other train has returned. B on receipt of this signal, will unlock the padlock at the side of his instrument and, when ready, will give ●–● ●–●–● ●–● to intimate that he is ready to receive the prolonged beat. A will then give a prolonged beat with his plunger and B during this prolonged beat will press the button at the side of the instrument with his right hand and with his left remove the switch handle from "on" to "off." After this has been done and A's prolonged beat has ceased, B will give the arrival signal ●–● ●–● ●–● followed by a prolonged beat, which will allow A to push in his ticket slide. A after pushing in his ticket slide, and after B's prolonged beat has ceased, will give the "arrival signal acknowledgment ●–● ●–● ●–●."

The block instruments at both stations will then indicate that the section is cleared.

a. The padlock key should always be kept in the Station Masters possession.

13. The Guard in charge of the train unable to proceed or of a Ballast or other train which has returned to the station from which it started, is responsible that the Line clear ticket for his train is delivered back to the Station Master to be cancelled; and he must see that the train going indicator returns from "on" to "cleared." He must also sign the train register book as a certificate that he has seen this done.

Interruption of Block.

14. If the instrument fails to work, although the above instructions have been carefully carried out, the instrument must be considered out of order and trains worked according to rules.

Testing by the Telegraph Inspector.

15. Whenever it is necessary for the Telegraph Inspector to test the instruments the work must be carried out in the following way :—

a. First the testing signals ● ● ● ● must be exchanged.

b. Then the Inspector will give the "Is line clear signal" ● ●–● ●, followed by a prolonged beat.

c. The Station Master, at the further end of the section (whom for the purpose of this rule we shall call B,) will, during the prolonged beat turn his switch handle to "on" keeping the button pressed in front of his instrument while doing so, and then give the "line clear signal" ●–● ●–●, followed by a prolonged beat.

d. The Inspector during the prolonged beat will pull out his ticket slide and remove the ticket and give ● ● ● followed by a prolonged beat.

e. During the prolonged beat, B will press the button at the side of his instrument (having previously unlocked the padlock) and bring his switch handle from "on" to "off," and then give ●–● ●–● ●–●, followed by a prolonged beat.

f. During this prolonged beat the Inspector will push in his ticket slide and give ●–● ●–● ●–●

The operation will then be repeated from station B. thus :—

g. B will give ● ●–● ● followed by a prolonged beat.

h. The Inspector will during this prolonged beat turn his switch handle to "on" and give ●–● ●–● followed by a prolonged beat. B during the prolonged beat will pull out his ticket slide and remove the ticket and give ● ● ● followed by a prolonged beat. During the prolonged beat, the Inspector will press the button at the side of his instrument (having previously unlocked the padlock) and bring his switch handle from "on" to "off" and then give ●–● ●–● ●–● followed by a prolonged beat. During the prolonged beat, B will push in his ticket slide and give ●–● ●–● ●–●

ENC. No. 1 TO R. R's C. No. 3198 OF 1896
LETTER No. 657 D. 25.7.96
FROM A.

The number of the ticket drawn at each station must be entered in the "train going" side of the register book with the remark "Cancelled for testing" and the ticket itself should be cancelled by an endorsement on it and must be sent to the Traffic Manager with a statement of the reason for its use.

16. The number registered when putting the switch handle to "on" should be entered on the "train coming" side of the register book with the remark "Used for testing."

Note regarding prolonged beat.

17. The intention of the prolonged beat is to enable the operator at the further station to perform certain operations, either with the switch handle, or the ticket drawer, and, as a general rule, a pressure of the plunger while *counting ten* will be found to be sufficient. But in cases where, from any cause, the operator receiving the beat finds this time insufficient, he will give the error signal, *as an intimation* that the prolonged beat must be repeated.

18. Guards will send in the line clear tickets, issued by the Block instrument, with their journals in the usual way.

TRAFFIC MANAGER'S OFFICE,
Trichinopoly,
15th July 1896.

HENRY DAVIES,
Ag. Traffic Manager.

RAILWAY.

Government {1896} of Madras.

PUBLIC WORKS.

Recd. } 1896. *Enclosures*
Regd. } *Spare copies*

G.O., No. 952 R., 7th November 1896.

NOVEMBER.

Winter's new Patent Block Apparatus

Estimate of Rs. 9,569 for introducing — on the section of the South Indian Railway between Tanjore and Máyavaram, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From the Agent, South Indian Railway, dated 3rd November 1896, No. 1017.

Abstract.—Forwarding, for sanction, an estimate of Rs. 9,569 for introducing the Winter's new patent block apparatus on the section of the South Indian Railway between Tanjore and Máyavaram.

Order—No. 952, R., dated 7th November 1896.

Sanctioned.

2. This sanction has been registered as No. 18 R. of 1896–97.

(True Extract.)

(Signed) F. D. FOWLER,
Offg. Joint Secy. to Govt.,
Railway Branch.

To the Agent, South Indian Railway.
" Examiner, Guaranteed Railway Accounts.

Exd. Shaik Karim.

No. 7933/3 / 146

South Indian Railway Co., Ld.
AGENT'S OFFICE,
Trichinopoly, 8th February 1897.

From

THE AGENT,
SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER
FOR RAILWAYS,
MADRAS.

Sir,

In continuation of my letter No. 657 of 25th July last I have the honor to forward herewith 12 copies of Traffic Manager's Circular No. G. 769 of 28nd January 1897 regarding the removal of Winter's Block Instrument at Tiruverambur and Trichinopoly Junction stations.

I have the honor to be,
Sir,
Your Most obedient Servant,
S. D. G. Shelley
Captain R. E.
Agent.

12 Enclosures by
~~Rp Parcel~~
Wol

630
1297

SOUTH INDIAN RAILWAY.

TRAFFIC CIRCULAR NO. G. 769.

Winter's Block Instrument at Tiruverumbur and Trichinopoly Junction stations.

The staff is advised that Winter's Block Instruments at Tiruverumbur and Trichinopoly Junction stations will be removed, after the passage of No. 12 mixed train over the section, on Wednesday the 27th Instant from which date trains will be worked on the "Absolute block" system, vide Chapter VI of the General and subsidiary Rules 1896, until further notice.

TRAFFIC MANAGER'S OFFICE,
Trichinopoly, 23rd January, 1897.

J. H. STENSON,
Traffic Manager.

To the S. M., _____

.....

Cut off this portion and return it to the Traffic Manager, Trichinopoly.

Received Traffic Circular No. G. 769 dated 23rd January 1897, regarding Winter's block instrument at Tiruverumbur and Trichinopoly Junction stations.

.....Station,
.....1897.

Station Master.

From
THE AGENT,
SOUTH INDIAN RAILWAY,
Trichinopoly.

To
THE CONSULTING ENGINEER FOR RAILWAYS,
Madras.

Dated
Received
No.
189

ENCLOSURE.

Winter's New Patent Block Apparatus

Revised estimate of Rs. 11,539 for the introduction of — on the section of the South Indian Railway between Máyavaram and Tanjore, sanctioned.

C. No. 630
Recd. 9/2/97

RAILWAY.

Government {1897} of Madras.

PUBLIC WORKS.

Recd.	} 1897.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 149 R., 11th March 1897.

MARCH.

Winter's New Patent Block Apparatus

Revised estimate of Rs. 11,539 for the introduction of — on the section of the South Indian Railway between Máyavaram and Tanjore, sanctioned.

From

THE AGENT,

SOUTH INDIAN RAILWAY,

Trichinopoly.

To

THE CONSULTING ENGINEER FOR

RAILWAYS,

Madras.

Dated } 189 .

Received } No.

ENCLOSURE.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From the Agent, South Indian Railway, to the Consulting Engineer for Railways, dated Trichinopoly, 8th March 1897, No. 266.

With reference to the sanction communicated in G.O., No. 952 R. of 7th November 1896, for the introduction of Winter's new patent block apparatus on the section between Máyavaram and Tanjore, I have the honour to submit, for the sanction of Government, a revised estimate (No. 1860/1893) amounting to Rs. 11,539. This revised estimate has received the Board's sanction (*vide* Managing Director's letter, No. 184 of 12th February 1897), and the reason of the excess of Rs. 1,539 is that the cost of the releasing gear was omitted in the original estimate. The funds required on Capital account during 1896–97, viz., cash Rs. 9,190 and stores Rs. 2,349, will be met from the provision made for this work in the preliminary issue of Capital Revised and Budget Estimates for 1896–97–98.

ORDER—No. 149 R., dated 11th March 1897.

The revised estimate amounting to Rs. 11,539, chargeable to Capital, for the introduction of Winter's new patent block apparatus on the section between Máyavaram and Tanjore is sanctioned.

2. This sanction has been registered as No. 32 R. of 1896–97, and is in supersession of that registered in G.O., No. 952 R., dated 7th November 1896, as 18 R. of 1896–97.

(True Extract.)

(Signed) F. D. FOWLER,
Offg. Joint Secy. to Govt.,
Railway Branch.

To the Agent, South Indian Railway.
" Examiner, Guaranteed Railway Accounts.

Exd. T. K. Narayana Aiyangar.

No. 346

South Indian Railway Co., Ld.
AGENT'S OFFICE,
Trichinopoly, 27th March 1897.

From

THE AGENT,
SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER
FOR RAILWAYS,
MADRAS.

Sir,

Referring to my letter No. 657 of the 25th of July last and 146 of the 8th ultimo, I have the honor to forward herewith for your information 12 copies of Traffic Circular No. G. 776, dated 26th January 1897, regarding the working of Winter's Patent Block and Automatic Ticket issuing Instrument at certain Stations.

I have the honor to be,
Sir,
Your most obedient Servant,
A. G. Ottley.
Captain R.E.
Agent.

12 Enclosures
Bookport

C. No. 1397
Recd. 29/3/97

From

The Agent,

South Indian Railway,

Trichinopoly.

To

The Consulting Engineer for

Railways,

Madras.

Dated

Received } 189

No.

Enclosure.

SOUTH INDIAN RAILWAY.

—:0:—

TRAFFIC CIRCULAR NO. G. 776.

Introduction of Winter's Patent Block and Automatic Ticket issuing Instrument at certain stations.

—:0:—

1. The staff is advised that Winter's Patent Block and Automatic Ticket issuing Instrument have been fixed at stations from Mayavaram to Tanjore inclusive and will be brought into operation, in lieu of the present line clear ticket system, at 6-0 A. M. on 10th Instant.

The instructions for working this Instrument are given on page 79 (Appendix F.) of the General and Subsidiary Rule Book 1896.

2. The following supplementary orders are now issued and Station Masters and others concerned are requested to make themselves thoroughly acquainted with the full requirements of the system :—

To give the description of train.

3 (*a.*) For **Mail** and **Passenger** trains, after the signal "Is line clear," pause——and give one more beat.

(*b.*) For **mixed** or **goods** trains, after the signal "Is line clear" pause——and give two more beats, thus : ● ●

(*c.*) For Special goods, **Ballast, Fuel** and **other trains** or **Light** Engine, after the signal "Is line clear" pause——and give three more beats, thus : ● ● ●

4. The Block Instruments must be carefully inspected every day by the Station Master who should take care that they are kept clean and in proper working order.

5. The Block Instruments must not be used for any other purpose than those prescribed in the Company's rules.

6. The Block Instruments must only be worked by men specially appointed or authorized for that duty.

7. The switch handle when at "on" can only be brought to "off" after the train has passed over a treadle connected either with the "distant" or home signal, and Station Masters must be careful that the signal to which the treadle is connected is not raised to "danger" again, after once being lowered for the train to enter the station, until the switch handle has been properly placed at "off", or otherwise the switch will fail.

Obstruction between two Block signal stations.

8. In the event of any obstruction occurring between two Block Signal stations whilst the line is blocked between them, such obstruction being due to the train breaking down, or other irregularity, the line must be kept "blocked" until such obstruction has been removed, and no time should be lost in advising the Officers concerned of such obstruction.

(*a*) On receiving particulars of the nature of the obstruction, the District Traffic Officer will act according to the rules governing such cases.

9. In the event of any obstruction occurring between two Block signal stations while the line is not blocked between them, such as a wash away of the line etc., the Station Master, who first receives the information must at once communicate it to the station at the other end of the section and the District Traffic Officer by wire, or, if that is interrupted, by the best means at his disposal, and no trains must be passed over the section until it has been ascertained that the obstruction has been removed and the line is safe.

Train Register Book.

10. Each station working a Winter's Block instrument is provided with a Train Register Book and all entries in this book must be made in full and in ink at the time the various signals are exchanged.

11. The Station Master, or the Signaller deputed to work the Block Instrument, must complete the entries in the Register Book at the time "line clear" is applied for and obtained.

12. If the Block be cancelled on account of any train being unable to proceed or on account of a Ballast train returning to the station from which it has started, a remark should be made in red ink in the remarks column of the train Register book thus : "Train unable to proceed, Block removed," or "Ballast train returned, Block removed," as the case may be.

13. When an interruption occurs between two stations, the Station Master at each end of the section must inform the Assistant Traffic Manager and the Telegraph Inspector of the same by telegraph, and the working by the Block system over the interrupted section must be suspended and the trains worked strictly in accordance with the instructions contained in Chap. VI of the General and Subsidiary Rules 1896.

14. When the Block telegraph has been again put in order, the working of the Block system must not be resumed until the Station Masters at each end of the interrupted section have satisfied themselves that the line between them is clear of trains by telegraphing to each other the train which last arrived at and departed from their station. This information should also be communicated to the Assistant Traffic Manager of the division by wire.

15. White Line clear Tickets must be issued for Up trains and pink Line clear tickets for Down trains.

16. The number indicated by the switch handle every time it is placed at "on" must be entered in the remarks column of the Train Register Book as also the number on every ticket taken from the instrument.

17. The Train Register Book must be examined and signed by the Station Master before leaving duty and his signature will be considered a certificate that all trains, as far as his knowledge extends, are duly and correctly entered in their regular course.

18. The Train Register Book in use must not be removed from the cabin or room in which the Block instruments are placed without the order of the Assistant Traffic Manager. If reference to the book is required, the Station Master on duty should go to the cabin or room and inspect it there.

Trains-order of precedence.

19. Trains will have precedence over each other in the following order :—

(1)	Mail	trains.	(4)	Troop	trains.	(7)	Ballast	trains.
(2)	Passenger	,,	(5)	Mixed	,,	(8)	Material	,,
(3)	Inspection	,,	(6)	Special goods	,,	(9)	Fuel	,,
						(10)	Light engines.	

(*a*) The superior train is that which is higher in the list and the inferior train that which is lower in the list.

(*b*) In the case of trains having the same order of precedence preference must be given to that train which has the greater distance to run.

20. When a mail train is carrying the overland mail it will take precedence over ordinary mail trains, but if the mail train in the opposite direction is also carrying an overland mail precedence will be given to the train carrying the outward overland mail, in the absence of special instructions to the contrary.

21. The Station Master of any station having given "Line is clear" for a train to leave the next station on one side must not give "Line is clear" to the next station on the other side for an inferior train unless he believes that such train can arrive without causing delay to the superior train.

22. It will be seen by the above rules of precedence that Station Masters are entrusted with certain discretion in regard to the ordering of the trains which they must carefully exercise.

Regarding the meeting and passing of Trains between Mayavaram and Tanjore :—

23. The notice from the Divisional Officer to Station Masters, Guards and Drivers regarding the meeting and passing of trains—vide instructions contained on pages 10—14 of the General and Subsidiary Rules, 1896—is not necessary for trains worked on Winter's block system and according to the order of precedence above given.

24. The Assistant Traffic Manager must, however, continue to carefully watch the working of the trains and issue any special order to Station Masters he may consider necessary, stating which train is to have precedence when trains are running more than twenty minutes late.

Station Masters must promptly advise the Divisional Officer by wire whenever a train is likely to leave a station more than twenty minutes late.

TRAFFIC MANAGER'S OFFICE,
Trichinopoly, 26th January, 1897.

J. H. STENSON,
Traffic Manager.

To the S. M., _____

.....

Cut off this portion and return it to the Traffic Manager, Trichinopoly.

Received Traffic Circular No. G. 776 dated 26th January 1897, regarding Introductions of Winter's Patent Block and Automatic Ticket issuing instrument at certain stations.

.....Station,
.....1897.

Station Master.

1 1397 7
345 27. 8. 97
From A