

Public Works (1893) Department.

RAILWAY BRANCH.

G.O., No. 1220-1R

DATED 18th September

[Despatch Abstract.]

Store balances. — Orders on the report by the Ex^r. Ac^t.
accounts, Madras, on the engineering — of the
Madras Railway, on 31-12-91.

Forwarding copy of Proceedings on the report
by the Examiner Railway accounts, Madras,
on the engineering — of the Madras Railway
on 31st December 1891.

[illegible]

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

Examiner's Report.

In continuation of my report on the suspense balances of the Madras Railway Company, forwarded with my No. 429-G., dated 2nd September 1892, I have the honour to state that I have tested the stock lists of the Engineering stores prepared by the Madras Railway on 31st December 1891 and further have the honour to report thereon as follows.

2. Before making the inspection I was informed that the system in force on the Madras Railway was for departments to keep numerical ledgers only and to periodically extract the numerical balances from these ledgers into stock lists, which lists were thereafter priced at current rates and the sum of the results compared with the aggregate balances on the Audit office ledgers.

3. Upon investigation, however, I discovered that the Engineering Department does not conform to this system, but keeps priced accounts.

It would appear most advisable that the store system in all departments should be uniform.

4. As a preliminary step to the test to be applied I asked the Auditor to furnish me with detailed lists of the stores said to be in stock and was accordingly shown the list annexed as appendix A, amounting to Rs. 9,00,059.

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Paragraphs 1, 2 and 3.—In the system adopted in this office the ledgers are not priced ledgers so called, but merely books recording the total receipts and issues with values for each month for the information of the Chief Engineer.

Examiner's further Remarks.

Paragraphs 1, 2 and 3.—(a) It is doubtful whether any stock ledgers are necessary in the Chief Engineer's office.

(b). Each district and workshop maintains its own stock lists and the sum of their several totals should, if priced, make up the Audit office balance at debit of Engineering stores.

In the preparation of the new ledgers the numerical system will be adopted and rate books kept.

Paragraph 4.—The amount of Rs. 9,00,059 shown in appendix A does not represent the value of all stores in stock at the date of the investigation but the balance standing to the debit of the Chief Engineer's Store and Workshops account on 31st December 1891.

4. I was under the impression that I was being furnished with an inventory of the stock in charge of the Engineering Department on date, and if this is not what is periodically prepared and submitted in support of book balances, the system requires alteration.

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Examiner's further Remarks.

5. Upon examination of this list I discovered—
(a) that numerical details had been furnished only for items amounting to Rs. 7,14,863 (*vide* appendix B);

(b) that certain adjusting items, amounting to Rs. 10,896, had been added to the stock in hand (*vide* appendix C), also that the value of stores in hand had been unduly reduced by certain credit adjustments amounting to Rs. 20,467 (*vide* appendix C) and that the net result of these adjusting entries was an undue reduction of the value of the stock in hand by Rs. 9,771;

(c) that a large number of items of stock appeared in the lists without value;

(d) that unadjusted credit balances, amounting to Rs. 4,373, had been allowed to unduly reduce the value of the stock in hand at the Terminal Workshops;

(e) that the so-called stock lists were incomplete to the extent of Rs. 1,94,966, inasmuch as no numerical details had been furnished for certain items making up that amount and included in schedule D hereto appended.

6. After considerable trouble and delay I ultimately obtained details of all the items included in schedule D excepting an amount of Rs. 1,227, being the balance on the Watch Department account current; although small, this account should, like all other manufacture accounts, have been supported by numerical details of stock and lists of unfinished jobs.

Paragraph 5.—(a) Details were hitherto supplied for important items only, and as neither the Chief Auditor nor previous Government Examiners ever called for minor items, no record was consequently kept for supplying this information.

(b) The debits and credits taken exception to by the Government Examiner must necessarily appear as entered, as they form part of the balance of the store and workshop account. Steps will be taken to reduce the number of such suspense items in future.

(c) It has been arranged that all items of stock on the divisions and in the terminal works without value shall be priced and brought on the books.

(d) This excess, amounting to Rs. 4,373, will disappear when the valuation of all unpriced items has been completed.

(e) The figure of Rs. 1,94,966 represents the value of the smaller items, details of which had never been previously submitted, but they will be furnished in future.

Paragraph 6.—The numerical details of stock and lists of unfinished jobs in connection with the sum of Rs. 1,227, being the balance of the Watch Department, could be prepared and furnished if demanded. 24 (d)

6. This, it is stated, has been subsequently prepared and submitted to Auditor—*vide* paragraph 5 (a).

(c) It is noted that the Company agree to adjust these items. But a report should be submitted showing when it has been done and its effect on the balance of capital locked up in stores.

(d) Noted.

(e) Noted; but see note to paragraph 5 (a).

7. Having thus obtained details I proceeded to test their accuracy and the following paragraphs will be found to deal with the various items of stock in their serial order of entry in schedules B and D.

8. *Stores at the Terminal Workshops valued at Rs. 89,853.*—(a) The Terminal Workshop stock contains the following important articles, the remaining items, although numerous, being small in value:—

Portland cement	Rs. 7,989
Swedish iron	2,939
Round iron	1,812
T iron	4,018
Teak timber	40,159
" scantling	8,985
Machinery	7,102
	<u>74,004</u>
Overcharges Cr.	4,373
	<u>69,631</u>

(b) A large number of items appears in the lists without value owing to overcharges, adjustments, omissions, and pendencies, viz:—

Acid, hydrochloric	lb.	2
Base plates	No.	9
Bottom castings, C.I.	"	16
Brackets for lamp-posts	"	37
Brass, old	lb.	14
Chairs, C.I.	No.	860
Clips, C.I., for pot sleepers	lb.	2,669
Coal	lb.	6,612
Chloride of copper	No.	2
Handles, brass	lb.	6,892
Iron, flat	"	2,680
" round	"	2
Nitrate of copper	No.	80
Pipes, C.I.	"	209
Pulleys for distant signals	"	23
Plates for screw apparatus	lb.	69,057
Rivets, iron	No.	11
Shoes, C.I.	"	110
Screws, W.I., for distant signals	"	452
Washers, galvanized	"	28
Wheels, angle	"	

(b) All the items have been priced and will be brought on the books in the month of June 1893.

(b) It is noted that these articles will be valued and taken to account.

Paragraphs 7 and 8.—(a) No remark necessary. 7 and 8.—(a) No remark necessary.

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(c) Several errors were found to have been made in extracting balances from the ledger into stock lists.

(d) The teak timber account showed the following startling results as regards prices:—

	Per cubic foot.
Stock at commencement of December half-year 1891	Rs. A. P.
Total receipts of half-year including stock in hand	1 14 3
Issues of period	1 11 4
Balance in hand at close of period	2 6 0
	1 6 4

From the above it will appear that the issue rate of the period has been much too high and that the stock in hand is some Rs. 7,000 to Rs. 8,000 understated owing to overcharges on issues.

(e) The teak scantling account valued at Rs. 9,985 was represented by a quantity of 4,503 cubic feet of scrap at an average price of Rs. 2-3-6 per cubic foot, which is higher than the value set upon good timber.

i. This account in January 1891 started with a balance of 10,347 cubic feet valued at Rs. 18,320.

ii. Without any special authority, however, Rs. 8730, were written off to Revenue expenditure in June half-year 1891 and the value of the stock was thereby reduced to As. 13-9 per cubic foot.

iii. 6,600 cubic feet were thereafter sold by auction at As. 4-2 per cubic foot in July, but no adjustment was made of the difference in value between As. 4-2 and As. 13-9. The balance on the account therefore remained at the excessive rate of Rs. 2-3-6 per foot on 31st December 1891.

iv. Of the stock of 4,500 feet in hand on 31st December 1891, 4,100 cubic feet were sold by auction in January 1892, realizing Rs. 1,175, or As. 4-7 per cubic foot, and the value of scantling would therefore appear to be overated by more than Rs. 8,000, unless, as is very probable, the actual quantity in hand is far in excess of the book balances owing to the faulty system adopted in the sawing account.

(f) Timber is accounted for under the following system:—

i. Certain logs are allocated to particular works and cut up.

ii. The actual measured outturn is then increased by 50 per cent. and charged to the several works. This addition of 50 per cent. to the quantity of the cut timber is based on an assumed wastage of 33 per cent. on the original capacity.

iii. A summary is made of the quantity charged to all works during the month and the difference between this total and the measured capacity of the

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(c) It was noticed that a few trivial errors had occurred in making up the lists and they do not affect the book balance.

(d) The variation in the price of teak timber in stock and that issued is difficult to deal with, inasmuch as the price including shipping charges of this imported timber is not furnished to this department for some months after the shipment has been cut up and issued, and an average rate of previous shipments has to be taken in making charges against works; but this has always been adjusted as correctly as it was practicable after the receipt of the bill.

Our stock on 1st July 1891 stood at Rs. 1-14-3 per cubic foot, and during July 1891, 158-38-4-3 tons of timber were received; this timber cost Rs. 1-10-10 per cubic foot, but the October price list in which its value was included was not received till 18th November. Again, tons 164-38-11-10 were received in November and charged for in December; the price of this second lot was Rs. 1-3-2 per cubic foot; in preparing the balance at 31st December all this timber at the lower price was added on to the stock, but the charges were received so late that the previous issuing price, Rs. 2-5-0, was maintained during the half-year. Hence the reduction of the balance per cubic foot on the 31st December.

(e) The quantity set apart as "scantling" can only be valued at first at the auction rate, but as demands for a certain class of work for which a portion of it can be utilized are met, the price of such portions is usually increased to nearer their correct value and a special adjustment in price accordingly made.

The stock of cubic feet 10,347 on 1st January 1891 stood at Rs. 1-12-4 per cubic foot and the 1,605 cubic feet of scantling taken into stock during the year at Rs. 2-5-0 per cubic foot, while the sales realized 5 annas only per cubic foot or about one-seventh of this latter figure. The sum of Rs. 8,730 was therefore written off against Revenue, but this appears to have been insufficient, for, notwithstanding this reduction, the balance at the end of the year, viz., 4,502 cubic feet, was found to stand at Rs. 2-3-6 per cubic foot or more than seven times the selling price. Hence the assumption on the part of the Government Examiner that the value of scantling was over stated by some Rs. 8,000.

The value of Rs. 2-5-0 per cubic foot fixed upon scantling is attributable to the fact that, under the system then in force for adjusting the timber account, any loss not covered by the 50 per cent. allowed in cut timber was thrown on to the scantling, but this method has now been rectified.

(f) i. Certain logs are not allocated to particular works, but a number of logs are put on the saw-pit and orders are cut from them in the most economical manner.

ii, iii, iv, v, vi. The system of dealing with timber is not correct for each individual log, because as stated in the report the 50 per cent. added to the outturn does sometimes exceed the actual capacity of a log, but in other logs the 50 per cent. does not cover the wastage.

The excess in the one case makes up for the loss in the other.

Examiner's further Remarks.

(c) It is noted that certain errors are admitted.

(d) i. This system should be remedied without delay.

ii. It is stated in another paragraph of the report that the large stocks now maintained are necessary to allow timber to be seasoned, and yet in the paragraph now under consideration it is stated that timber has time to be cut up, issued, and, it is presumed, seasoned, before its price can be ascertained.

(e) The reply of the Chief Engineer in this and subsequent paragraphs only confirms me in my previous opinion that the system requires revision by having the actual quantity of scrap periodically measured and taken into stock at a fair valuation.

See remarks against paragraph (e).

This appears to be a fact rather than an assumption.

See remarks against paragraph (e).

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logs consumed is debited to an account called "Dug-
gies and Scantlings," thus :—

	FT. IN. PARTS.	FT. IN. PARTS.
Log No. 69/1918 contents ...	36	1 6
Cut up beam, order		
No. 929 ...	23	0 6
Add 60 per cent. ...	11	8 9
	35	2 3
Charge to duggie and		
scantling ...	0	11 3
	36	1 6

iv. This system of dealing with scantling or (as it would be more accurately described) "scrap" is manifestly incorrect as the quantities brought to account never agree with the actual results of sawing.

v. In some cases, the actual outturn *plus* 50 per cent. exceeds the capacity of the log cut up, and, in such cases, no scrap timber is taken to account although there must necessarily be some.

vi. The following summary of a month's transactions will show to what extent the system is erroneous :—

	C. FT.
36 logs containing ...	1,715
When cut up yielded ...	1,050

And the scrap and saw-dust originally measured ... 665

or 38 per cent. of original quantity.

Of this 665 feet, 50 per cent. of 1,050 or 525 cubic feet were added to the outturn and the scantling account was debited with 140 feet only; 525 cubic feet of scrap have therefore been omitted from the accounts.

8 (f) vi. This was owing to abnormal wastage from certain of the logs which were found to be unsound when cut up. See remarks against para- graph (c).

vii. As a proof of the error in system, it would appear from the accounts that during a period of 9 months between January and October 1891 there was no debit to the scrap account although the sawing operations were considerable.

vii. During the 9 months mentioned, if the actual outturn during that period be increased by 50 per cent. and the sum so obtained subtracted from the contents of the logs cut, there ought to have been a balance of 1,800 cubic feet to be taken into the scantling account. See remarks against para- graph (c).

The reason why no timber was taken into the scantlings account was that the 50 per cent. allowed did not cover the actual wastage and what timber did remain was very inferior scrap and as such was used as fuel for the workshop engine. See remarks against para- graph (c). No scrap should be used as fuel unless paid for at a fair valuation.

viii. I am satisfied with the present method of dealing with the teak timber and am of opinion that by means of periodical adjustments for wastage the prices are regulated as accurately as possible. viii. I retain my original opinion.

Paragraph 5.—(g) Sanction will be applied for to charge off the vertical boiler to the workshops now that it has been tried and tested and found suitable for the work. (g) It is noted that sanction will be applied for.

(h) The explanation as regards this item has already been given under paragraph 6 (d). (h) Noted.

viii. The proper course to adopt would be to periodically measure and value the scrap after fixed sets of sawing operations and to charge works with the value of the original logs less the estimated value of scrap recovered and taken into stock.

(g) Included in the item of machinery as stock in hand is a vertical boiler valued at Rs. 2,455, which is old and in use in the workshop. It is irregular to treat articles in use as in stock and ostensibly available for issue and sanction should apparently be obtained to charge this engine off to works.

(h) The overcharges of Rs. 4,373 have already been alluded to in paragraph 5 (d) and paragraph (b) of this section; they are mainly due to errors in pricing and have affected the stock lists in double directions, inasmuch as no value has been given to the numerical quantity on hand, while a reduction of totals has resulted from entering the credit balances.

(i) In addition to the items referred to in paragraph (b) of this section as stores in stock without value, owing to overcharges and errors in pricing, there are also considerable accumulations of stock in hand, which have never been priced at all owing to a want of system in dealing with returned stores. (i) and (j) This must refer to some recent operation. My original statement was correct at the time my report was framed.

(j) Under these circumstances, neither the priced stock lists submitted nor the balances on the Audit office ledgers accurately represent the amount of capital locked up in stores, while the possibility of speculation is much enhanced by the absence of priced records. It would appear advisable to bring all material belonging to the Company upon its books at a fair value based at the very least upon the price it might reasonably be expected to fetch at auction.

(k) With a General Store adjacent to the Terminal Workshop at Rāyapuram, it would further appear inadvisable to keep a separate engineering stock of many of the items of a general nature now borne on the lists of the Engineering Department.

(l) It would also seem inadvisable with large timber stocks (which roundly amount to a value of Rupees 2,70,000) maintained in the Locomotive Department to keep up such a large further separate engineering stock of Rs. 50,000.

(k) The General Stores Department deals with new material only, and when this has been once issued, the storage and ultimate disposal of such material devolves on the department to which it is issued. The General Stores Department moreover is not in a position to take up this work and the staff at the head-quarters of the Engineering Department has been too limited to cope more expeditiously with the labour involved in dealing with the large mass of plant and stores returned from the Pennér, Chitravati and Papagni bridges in addition to the ordinary routine work in connection with items returned from the open line.

We never indent for any material from the General Stores in excess of what is required for actual use.

Our stock now consists chiefly of plant and old iron of a miscellaneous description returned from divisions. The latter will be disposed of at auction.

(l) From past experience it has been found essential to keep the timber stocks of the Engineering and Locomotive Departments separately.

The description and dimensions of logs required for the former will not meet the requirements of the latter department; any amalgamation of either the stock or the accounts would lead to confusion and needless correspondence; besides the stock of timber for the Engineering Department must be retained at Rāyapuram, whereas that for the Locomotive Department is removed to Perambūr Works, 4 miles away.

(m) Certain items appear in the receipts and issues without price and are called pendencies. These, it is said, are owing to the prices of the supplying department not having been received.

In some cases, these pendencies were three and four months in arrear, and in the case of one article it was noticed that the transactions of December had been priced, while those of the preceding months of October and November were still left pending.

Some arrangement would appear to be necessary to improve the system of pendencies.

9. *Permanent-way materials* (Rs. 5,40,696).—(a) The quantities and amounts in this list have been compared with ledgers maintained in the Chief Engineer's office and with the divisional returns and found correct, except as regards the item of fish-plates, which are 528 short stated.

(b) The quantities in the stock list have, in the case of important articles, been divided into their value for the purpose of ascertaining the rate per unit of stock in hand.

(c) These rates have then been compared with the market values current at the time for similar articles and with the rates at which the articles were being issued with the following results :—

	Stock value.	Issue rates.	Market price.
Rails, steel, 20 feet	Rs. A. P.	Rs. A. P.	Rs. A. P.
" " 17 "	16 0 6	14 11 8	14 13 7
Pot sleepers	11 14 4	11 14 0	11 13 10
Tie bars	2 3 4	2 3 4	2 3 7
Fish plates	1 1 6	1 1 4	1 1 10
" bolts	0 6 6	0 7 11	0 8 4
Track keys	0 3 0	0 1 7	0 2 0
	0 0 6	0 0 6	0 0 6

(m) Pendencies are unavoidable inasmuch as material is received from General Stores and the Locomotive Department in one month, while the charges for the same are not furnished for frequently two months afterwards and during the interval the items stand in the books without value. It is understood that the prices of such items cannot be furnished in a shorter time.

I am not aware to which particular item the Government Examiner refers. If any such item was not priced for October and November, while that for December was, it must be because the charge for the previous months was not received in this office from the department issuing the material.

Paragraph 9.—(a) The 528 fish-plates noted as short stated were issued by the General Stores in December 1891 and were brought into stock at the Arkonam depôt in January 1892 and adjusted.

(b) No remark necessary.

(c) The rates at which these articles of permanent-way material were being used are as correct as it is practicable to fix them.

(m) It is presumed that similar improvements will be introduced to those promised in the Locomotive Department.

The item in question was "Dushes, brass."

9.—(a) It is noted that this error is admitted and adjusted.

(b) No remark necessary.

(c) Ditto.

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(d) With the exception of fish-plates and fish-bolts, which require revision, the rates seem to be as nearly correct as is possible on a system of averages.
(e) The stock of teak keys seems large, it being sufficient for 100 miles of track at the rate of 4,000 per mile; but I am informed it is only sufficient for one year's requirements.

(f) Certain of the items in the lists, such as wooden sleepers, switches, &c., are not capable of check in consequence of one general entry having been made for material of greatly varying prices. For instance, teak sleepers are issued at rates of Rs. 28, Rs. 21, Rs. 15 and Rs. 12, respectively, according to size, whereas they are shown in the stock list in one item which works out to an average rate of Rs. 15-13-1 per sleeper.

(g) The quantities of each class of sleeper or other article of store should have been detailed in the stock list and worked out at its own rate and the sum of the whole compared with the aggregate ledger value. This should be noted in preparing future lists.

10. *New permanent-way material and iron work for strengthening bridges, viz.:*—

Permanent-way, schedule B	Rs. 61,597	Rs.
" " " D	22,909	
Bridges, schedule D	...	84,508
	...	16,909
	...	1,01,415

These items represent special English invoices for rails and cross beams obtained for strengthening bridges and are correct in the aggregate although some of the detailed entries in the ledger and lists are inaccurate.

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(d) The price of fish-plates and fish-bolts has since been revised.

(e) The stock of teak keys retained is sufficient for one year's requirements, and from experience it is found inadvisable to keep a less quantity.

(f) and (g) The wooden sleepers and switches are shown in bulk in the ledger at head-quarters, but they are fully classified as regards size in the divisional stock lists. They will be shown separately in future half-yearly stock lists.

Examiner's further Remarks.

(d) It is noted that the error pointed out has since been rectified.

(e) This is an executive question and the explanation appears satisfactory.

(f) and (g) It is noted that the Company agree to submit correct inventories in future.

Paragraph 10.—The so-called inaccurate entries can, it is assumed, only refer to the absence of entry in the stock ledger at head-quarters of the details of the 40 different items of iron fittings belonging to this stock.

The principal items only are entered and these minor items grouped under one head, but all the minor items will be found enumerated in detail in the depot stock list at Arkonam to which reference should have been made. It appears quite unnecessary to enter all such details in the stock ledger at head-quarters.

10. I have no further remarks to offer beyond stating that my report does not complain so much of errors in the Chief Engineer's ledger as of incorrect entries in his priced inventory.

I agree; but such entries as are made should be accurate.

11. *Twelve 35-feet W.I. girders (Rs. 4,865-10-0).*—These are said to be an emergency stock and are at present located in the following divisions, although they are not borne on their stock lists:—

South-West Line, 2nd division	...	4
North-West " 1st	...	4
" " 2nd	...	4
Total	...	12

Paragraph 11.—These girders are shown separately in the special emergency stock lists which are specially scrutinized with a view to keeping them complete in all respects to meet demands in case of accidents. They will in future be included in the divisional stock lists.

11. Noted.

12. *One 24-feet W.I. girder (Rs. 200)* has been in Arkonam depot since December 1888.

Paragraphs 12 and 13.—These form part of the emergency stock.

12 and 13. Noted.

13. *One 14-feet 6-inches W.I. girder (Rs. 91-9-1).*—This is a part of the emergency stock and is lying on 4th division, South-West Line.

14. *Seventy-two cast-iron girders at Perambur (Rs. 3,445).*—These have been in stock since 1885 having been ordered for roofing the carriage shops. Their value has been reduced by about 40 per cent. of the cost price.

Paragraph 14.—These 72 cast-iron girders are intended not for the roof but to replace those on which the travelling crane runs in the carriage shops.

14. Noted.

These are kept in stock as the existing girders, which are liable to fail at any time, have to be renewed promptly to save interruption to the works. Their value, which was reduced under the old system by the credit received from sales, will now be restored to its original figure.

15. *Two sets of 14-feet 6-inches girders (Rs. 470).*—These are lying on 1st division, South-West Line, and are priced at half value, being returned stores.

Paragraphs 15, 16 and 18.—These items will now be written up to their full value. The fourth turn-table is borne on the books without value as it is very incomplete and can only be priced at a nominal figure.

15, 16 and 18. Noted.
The fourth turn-table might be valued as old iron.

16. *Four sets of W.I. girders, 1.59 feet 10 inches (Rs. 8,930) and charges thereon (Rs. 2,606-7-1).*—These have been returned from works and strengthened for use on other bridges.

17. *Two engine turn-tables (Rs. 1,500).*—These have been in stock since 1887; their original cost was Rs. 8,763 and they are of 50 feet and 40 feet diameter, respectively.

18. *Three wagon turn-tables (Rs. 1,500).*—These were received from England in 1848; a fourth turn-table is borne on the books without value.

19. *Six water-columns (Rs. 320).*—The divisional stock lists show four only, two having been issued and not charged off till next half-year.

20. *One engine turn-table at Podanur (Rs. 1,500).*—This is not in the stock lists of the division, it having been condemned and taken to pieces and the component parts made available for renewals. It is stated the item will be cleared off the stock in June 1892.

21. *One air-pump (Rs. 630) and two hand pumps (Rs. 1,024).*—These items call for no special remark.

22. *Surveying instruments (Rs. 540).*—The details furnished in support of this item are shown in schedule E.

Considering that the list contains 25 theodolites, 35 levels and 12 boxes of mathematical instruments, their value seems ridiculously small. It would appear necessary to set apart the instruments forming the working plant of the several offices and to re-value the remainder and treat them as surplus stores.

23. *Surveying instruments, new (Rs. 203).*—These are not in the engineering books and are in custody of the General Storekeeper, although the storekeeper does not include them in his list of articles warehoused for Engineering Department (*vide* appendix II.)

A system of retaining the value of an article in the list of one department and the quantity in that of another may lead to the inclusion of the articles in the stock lists of both departments.

In my opinion all stock which is not likely to be required for any considerable period should be borne on the books of the General Storekeeper and indented for by departments when required only.

24. *Telegraph stores (Rs. 20,503), watch materials (Rs. 1,227).*—(a) These stocks should, in my opinion, be kept separate from engineering store and accounted for direct to audit, as they appear to receive very little scrutiny from the Engineering Department; it is further doubtful whether separate store accounts are necessary to so large an extent as now maintained.

(b) The stock list of the Telegraph Department consists of some 200 to 300 items, many of which might possibly be obtained from General Store as required.

(c) As a proof that the present system is unsatisfactory, it may be stated that two of the items included in the list of stores in hand on 31st December 1891 were the following, viz:—

Proportion of general superintendence	Rs. 684
" of home payments	237
Total	921

These are not represented by anything of tangible value, being debits which should have been added from time to time to the cost price of stores.

This sub-division having been neglected, the debits have been accumulating since 1889 and treated as stock in hand.

Paragraph 17.—Both these engine turn-tables have been charged off, one to Arkonam and the other to Renigunta; and the old ones they replaced are too much deteriorated to offer for sale except as old iron.

Paragraphs 19, 20 and 21.—call for no remarks.

19, 20 and 21. No further remarks to offer.

Paragraphs 22 and 23.—The greater portion of these surveying instruments were charged off when they were originally issued to the several divisions over 30 years ago and these appear without value; some of them returned to store are valued at a nominal figure as they were of an obsolete type and much deteriorated.

Some have been sold during 1892, and some of the material has been entered in the surplus stock list. I am having the remaining stock carefully examined and whatever is found unserviceable will also be entered in the surplus stock list.

Paragraphs 22 and 23.—It is noted that the Company is re-valuing the stock in terms of my suggestion.

Chief Engineer's Remarks.

Paragraph 24.—Dealt with separately by Telegraph Engineer.

Agent and Manager's Remarks.

With reference to paragraph 24, the Acting Telegraph Engineer has been communicated with and in future he will be careful to indent on the General Stores for the ordinary stores he may require. Such items as those referred to in paragraph 24 (c) will not appear in the Telegraph store account in future.

24. It is noted that the stocks of the Telegraph Department will be reduced to a minimum and that the errors pointed out will be adjusted.

Examiner's Report.

(d) The absence of details regarding watch materials has been referred to in paragraph 6.

25. *Stores in hand on account of station machinery (Rs. 13,425) and points and crossings (Rs. 2,553).*—These represent certain stocks held by inspectors and contain many items which might be obtained and charged off as required.

They further do not include the whole of the stock of the classes they nominally represent, as the bulk of the stock is included under the head "Permanent-way."

26. *Brick-making stock (Rs. 2,090).*—This stock is duly supported by divisional balance sheets. In the case, however, of stock in the Terminal Workshops, the balance brought forward is valued at Rs. 12 per 1,000, the issues therefrom have been made at Rs. 15 per 1,000 and the stock in hand reduced to a value of Rs. 7 per 1,000 in consequence of the apparent overcharges.

27. *Unfinished works on the Terminal Workshops (Rs. 474).*—These are supported by detailed lists extracted from the works ledgers; on comparing these lists with the books several petty inaccuracies were discovered, while the writing up of the books was considered to be capable of much improvement.

28. *Permanent-way Materials taken out between Beypore and Kadaloon-di (Rs. 1,283).*—(a) On completion of the Calicut extension certain old material was credited to the work at half price amounting to Rupees 23,818.

(b) Instead of bringing the articles on to the ordinary stock accounts according to nomenclature,

they were kept on a separate account and as issued or sold the value realized was credited in reduction of the Rs. 23,818.

(c) The credits so made have reduced the account to Rs. 1,283 as shown in the stock lists.

(d) Upon applying for details of the items comprised in the balance of Rs. 1,283, I was furnished with the list hereto annexed as appendix F, which, if priced, will make up a value far exceeding the Rupees 1,283, at which they are borne on the books.

(e) The items included in this list should be valued and transferred to their proper heads in the ordinary returns.

(f) The system of keeping separate accounts for material obtained from particular districts or works is complicated and unnecessary.

29. *Surplus stores remaining at Terminal Workshops (Rs. 954).*—This question has already been touched upon in paragraph 8 (i) and (j). A list of the items comprised in the item of Rs. 954 is annexed as appendix G and a further list of unvalued articles belonging to the Engineering Department and warehoused in the General Stores Department without value on 31st December 1891 is annexed as appendix H.

It is impossible to state which of the particular articles comprised in these lists make up the assumed value of Rs. 954, but there is little doubt that they would realize five or six times that amount.

30. *Screw-piles (Rs. 4,390).*—Six hundred and ninety-three screw piles recovered from bridges were in June half-year 1891 returned into store at a rate of Rs. 10 per 35 lineal feet, 35 lineal feet being a ton or thereabouts. The ordinary sale rate for iron scrap is about Rs. 20 per ton and these screw-piles are therefore considerably undervalued.

Replies of Railway Officers.

With regard to paragraph 24 (d), the Acting Telegraph Engineer states that he has furnished the Chief Auditor with the details regarding the watch materials.

Paragraph 25.—In future, items from General Stores will only be indented for as required by the inspectors of the branches named.

Paragraph 26.—The value of the stock of bricks appeared as Rs. 7 per 1,000 in December 1891 in consequence of an overcharge in that half-year; this was subsequently adjusted and the present rate stands at cost price.

Paragraph 27.—The writing up of the books will be attended to and improved.

Paragraph 28.—(a), (b), (c), (d), (e) and (f). These Permanent Way materials were taken out of the abandoned portion of the line between Kadaloon-di and Beypore and were originally kept in a separate account which has now been closed, the items being transferred to the several heads in the ordinary returns will now appear at a fair valuation.

Examiner's further Remarks.

Noted.

25. It is noted that the stocks of the inspectors of station machinery and of points and crossings will be reduced to a minimum.

26. It is noted that the Company have corrected the error.

27. Noted.

28. It is noted that the Company will transfer these items to their proper account heads at a fair valuation.

29. No further remarks, as the Company has agreed to re-price all stock at a fair market value.

Paragraph 29.—This has been explained in the remarks under paragraph 8 (i) and (j).

30. No further remarks, as the Company has agreed to re-price all stock at a fair market value.

Paragraph 30.—These screw-piles were taken into stock at a nominal value of Rs. 10 per ton as they are unsalable. They cannot be considered as equivalent to ordinary iron scrap as they are of solid iron 35 feet long and 6 inches diameter and the labour of cutting them into pieces to convert them into scrap would be very costly.

31. *Old rails (Rs. 1,07,694).—(a)* This amount is made up as follows:—

	65 lb.			75 lb.			84 lb.			Total.	
	17	17	17	17	17	17	17	17	17	17	17
Stock at the Terminal	9,728	58	4,540	1,014	14	11,000	107				Rs. 1,07,694
Stock at the Station	2,116	79	2,400	548	97	3,448	928				{ 1,4,077
Stock at the Station	416	71	310	14	4	800	96				{ 3,454
Total	12,250	208	7,250	1,576	115	15,248	1,091				1,07,694

* Equal to 4,377 tons at 5 rails a ton at Rs. 25 per ton.

† At Madras.

‡ Distributed on the several divisions.

§ At Fort station.

(b) Upon investigation, it, however, transpired that this did not represent the entire stock of old rails belonging to the Company.

(c) Under G.O., No. 1779 R., of 18th November 1890, some 7,000 tons of old rails were ordered to be brought on the books, but, instead of doing this at once and in one item in the divisional returns, the rails in question were roughly dealt with in the returns of the head office with the result that the stock on the line is worth about Rs. 71,000 more than shown in the Company's stock lists as may be seen from the following table made up by pricing the actual stock included in the unpriced returns of the several divisions.

84 lb. rails, 51,673 feet, at Rs. 7 per 20	Rs. 18,088
75 lb. rails, 208,600 feet, at Rs. 6 per 20	61,980
65 lb. rails, 394,784 feet, at Rs. 5 per 20	98,695
Total	1,78,763

(d) The entries made in the head office returns from time to time were arbitrary estimates unsupported by any detail quantities as may be seen from the following:—

October 1890	...	...	...	...	Rs. 54,000
December 1890	...	...	...	...	70,000
June 1891	...	...	...	...	10,000

(e) No ledgers of quantities were maintained in the head office in respect of old rails, and, although quarterly unpriced lists have been prepared and submitted by district officers, no attempt seems to have been made to make these agree with the head office returns or with the stock lists.

(f) In my opinion the whole of the rails in the custody of district engineers should be at once brought on the priced divisional returns as the present system is most irregular.

(g) I further discovered with regard to the stock borne on divisional priced returns and said to be worth Rs. 43,912 that at the rates in force for return of old permanent-way material [vide paragraph (f)] the quantities entered on the lists only work out to Rs. 38,237.

(A) The difference of Rs. 5,705 is due to the fact that the stock at the commencement of the year was valued as follows, viz.:—

65 lb.	...	...	...	...	Rs. 8
75 "	...	...	...	...	9
84 "	...	...	...	...	10

(i) Under authority of minute No. 7 of 1891, however, the future issue rates were reduced to Rs. 5, 6 and 7, respectively, resulting in a reduction of about Rs. 16,016 in the value of stock; but no adjustment of this item was made in the books.

Paragraph 31.—(e) to (m) Prior to July 1890 all old rails stood "without value" and as they were sold the amounts realized were credited to the stock of new rails, thereby reducing the value of the latter.

On the 1st July 1890, orders were issued to the divisional engineers to open an account of old rails removed from the line from that date and to send to Madras and Kallai all the old rails taken out from the line and in stock previous to that date. This necessarily occupied some time to carry out, but these rails were valued as the several instalments were received, and in order to cover the large sales of old rails during the second half of 1890 and first half of 1891 the lump sums given in (d) were entered to the debit of the store and workshop account, these sums being based on figures slightly below the estimated quantity which were expected to be received in those periods. All the old rails dealt with prior to July 1890 have now been accurately brought to account and the store balance on 30th June 1893 will show correct details worked up to actuals under this head. In addition to this the rails removed from the line subsequent to July 1890 have been brought into the accounts monthly.

The amount of Rs. 71,069 referred to by the Government Examiner represents the balance of old rails removed from the line prior to July 1890 and not brought to account until 1892.

31.—(a) The Company admit the error of Rs. 71,069 or thereabouts and state that it has been adjusted.

(b) No separate allusion is made to the error of Rs. 5,705 in pricing new rails, but this will be covered by the re-valuation suggested by the Company.

(c) The important question of valuing returned rails when fit for use in main line at a different rate to those which are useless for that purpose has not been touched upon.

(j) This deficiency has been almost adjusted by means of the augmented prices obtained from public sales (*vide* paragraph *i*) and will by this means ultimately be wiped off.

(k) Such adjustments should, however, in my opinion, be made by debit to Revenue as soon as sanctioned and not allowed to remain in arrear until adjusted by the transactions of subsequent periods.

(l) The following table will show the value allowed for returned 20-foot rails as compared with cost price:—

Rails.	Rate at which brought on to stock.	Cost of new material on basis that a 75 lb. rail of 20 feet costs Rs. 16, other sizes being proportionately increased or reduced.	Rate at which sold to public.
65 lb.	Rs. A. P.	Rs. A. P.	Rs. A. P.
75 "	6 0 0	12 0 0	8 12 0
84 "	6 0 0	16 0 0	10 0 0
	7 0 0	16 12 10	11 4 0

(m) The rates allowed for returned rails do not average half value, and, as some rails, when recovered, must be fit for use in the main line, it would appear advisable to sub-divide returned rails into serviceable and unserviceable and quote a separate rate for each instead of adopting, as at present, an unserviceable rate for the whole. It should further be remembered that the rate quoted for new material is calculated at 1s. 10d. to the rupee and that for sale purposes this rate would require to be increased by about 50 per cent. to provide for the current rate of exchange. The rate realized by sales of old material is about 4/9 of this augmented price of new material and would therefore appear to be a very good one.

(m) Ditto.

32. *Comparison with Audit Ledger.*—(a) The stock in hand as per lists originally submitted by the Chief Engineer amounted to Rs. 9,00,059 compared with Rs. 8,78,923 standing on the Audit office ledger resulting in an excess of Rs. 21,136 over the Company's books.

(b) This excess in the course of investigation has been augmented to the following extent, viz.:—

Original excess	Rs.
Add—	21,136
Adjustments [<i>vide</i> paragraph 5 (b)]	9,771
Credit balances [<i>vide</i> paragraph 5 (d)]	4,373
Permanent-way [<i>vide</i> paragraph 31 (c)]	71,009
Teak timber [<i>vide</i> paragraph 5 (d)]	8,000
	1,14,349
Less—	
Scantling [8 (c) iv.]	8,000
Permanent-way [31 (g)]	6,705
	13,705
Net apparent excess of stock over Audit office balances	1,00,644

(c) The above excess would be still further augmented if the whole of the unpriced stock were brought to account and certain articles now standing at very low rates re-valued.

(d) Again the Engineering head office ledgers had not at the time of my inspection been posted for the June half-year 1892 and the books were therefore practically useless as stock records.

33. *Conclusion.*—The foregoing remarks lead me to express the opinion that the state of the Engineer store accounts is far from satisfactory, especially as regards returned stores, and further that the existing system does not provide for a sufficient control by the Auditor of the Company.

Paragraph 32.—The excess of stock over Audit office balances will be adjusted, as the Chief Auditor proposes, after the investigation of the General Stores has been completed. In the meantime, I am having all our stock of stores without value priced and brought on to the ledger, and from January 1893, the system of posting the ledger monthly immediately after the submission of the monthly accounts has been adopted.

32. It is noted that the Company agree to make all necessary adjustments.

Agent and Manager's Remarks.

Paragraph 33.—With respect to the concluding remarks—paragraph 33 to the end—I would beg to observe that the Chief Auditor considers the existing system does not prevent control by his office, but for years no one has been available to look into this work. It is now hoped that henceforth he will be able to depute an officer at regular intervals to do so.

33. It is noted that more attention will be devoted to the Engineering stores by the Audit office.

Examiner's Report.

34. In my note No. 429-G., dated 2nd September 1892, an extract from which is given in appendix I, I called attention to certain apparent defects in the general system of stores on the Madras Railway, and I would now further suggest that all stores of an important nature should be borne on priced ledgers kept in the Audit office and that the numerical system should only be allowed to apply to articles which are small in value, although numerous in quantity; also

(a) That the Engineering and other departments retain charge only of special stores peculiar to their own requirements and that stores of a general nature be obtained from General Stores by indent as required;

(b) That one timber stock be maintained for the entire railway instead of separate stocks in each department or that the balance in each department be considerably reduced;

(c) That all surplus and unserviceable stores be borne on the books of the General Store although the department concerned or a committee of experts would naturally fix the prices of such articles and be consulted before they were disposed of by sale;

Agent and Manager's Remarks.

Paragraph 34.—It is considered desirable that the Chief Engineer should keep his own accounts.

Chief Engineer's Remarks.

(a) Measures will be adopted in future to indent on General Stores for materials as required.

(a) The Chief Engineer accepts this suggestion.

Chief Engineer's Remarks.

(b) As already explained under paragraph 8 (2) this is not practicable. The stock of timber for the Engineering Department suffices to meet the demands for one year only and therefore cannot be reduced.

Agent and Manager's Remarks.

(b) The stock of timber cannot be reduced. Large stocks are required to admit of properly seasoned timber being used.

The Chief Engineer points out the disadvantages of keeping one stock only [vide paragraph 8 (c)].

Chief Engineer's Remarks.

(c) It is understood that the General Stores Department is not in a position to deal with this work, and past experience has proved that it can be more satisfactorily controlled by the Engineer's Department.

Examiner's further Remarks.

34. See my note to paragraph 1. It is doubtful whether any stock accounts are necessary to be kept in the Chief Engineer's office.

(a) i. It is noted that the Company accept this proposal.

ii. Stores withdrawn from General Stores for actual use need not be passed through Engineering stock account as they can be debited direct to works.

(b) I have no further remarks to offer.

Agent and Manager's Remarks.

(c) It is thought that the proposal to have all surplus and unserviceable stores borne on the books of the General Stores would lead to the transferring departments fixing higher prices than would be legitimate on such stores and would thus result in Revenue being over-credited. The present system seems the better one.

(c) The mode of valuing old stores is prescribed in the Government of India Resolution, Nos. 213-218-A.G.R., dated 11th April 1874, and the Government of India Circular No. IX (Railway), dated 1st May 1883; and if this procedure be adopted, there is no danger of excessive valuation. In fact, the storekeeper would exercise a check on the district officers whose advantage it would be to value at as high a rate as possible.

Chief Engineer's Remarks.

(d) It is found indispensable that the terminal works and divisional engineers should communicate with the Audit office through the Chief Engineer's office on all matters regarding stores accounts and not directly with the former office, and I do not recommend any change in this respect from the present system.

(d) That sub-divisional workshops, such as the Terminal and Telegraph and District Engineers, be in direct communication with the Audit office on all matters regarding store accounts;

Agent and Manager's Remarks.

(d) From the 1st July the Telegraph store account will be kept distinct from the Engineering store account and the Telegraph Engineer will deal direct with the Audit office.

The similar proposal regarding the terminal workshops and district engineers is considered unnecessary and no good results would follow its adoption.

(d) i. It is noted that the Telegraph Department will, in future, deal direct with Audit.

ii. As regards districts and workshops, I shall not, in face of the Company's opinion, make any

Examiner's Remarks.

Replica of Railway Officers.

Examiner's further Remarks.

further objection to accounts being transmitted through the Chief Engineer, but he should not, in my opinion, require to maintain any stock ledgers.

iii. Each Divisional Engineer and Workshop Superintendent should be responsible for the store in his own charge and the sum of the whole of the stocks should agree with the aggregate balances on the audit ledger.

Chief Engineer's Remarks.

(e) I strongly deprecate the closing of the Engineering Account office and its transfer to the Audit office, as the constant references necessary would lead to increased and needless correspondence. All that is required is an adequate staff under competent control to effect certain improvements in the direction suggested by the Government Examiner.

Agent and Manager's Remarks.

(e) This suggestion is disapproved of both by the Officiating Chief Auditor and the Chief Engineer.

Chief Engineer's Remarks.

(f) The divisional accounts are at present on a very satisfactory footing and are most valuable. The ledgers are required to enable the Resident Engineers to examine their stock when necessary.

(f) That divisional accounts be simplified by the abolition of ledgers as far as possible, the whole of the store details being incorporated into monthly returns to the Audit office similar to those now in use for rails;

(f) I have, in a subsequent report on the Bangalore division, dated 27th June 1893, called attention to the fact that the work in the district offices connected with stores is unnecessarily heavy and that ledgers are, in my opinion, unnecessary.

Agent and Manager's Remarks.

(f) It is thought that if ledgers be kept at all for divisional accounts they may as well be complete. It is pointed out by the Chief Engineer that the ledgers are necessary.

Chief Engineer's Remarks.

(g) The present system works satisfactorily and I do not consider any change advisable.

There will always be some difficulty in keeping fixed imprests up to their proper limit, especially in raw materials, and no material advantage would be secured by the arrangement.

(g) In the same report I have alluded to the advantages to be gained by an imprest system, and, as it is accepted by the Company in the case of the Locomotive Department, it should also, in my opinion, be tried in the Engineering Department.

Agent and Manager's Remarks.

(g) The suggestion made here the Chief Engineer does not desire to adopt.

Chief Engineer's Remarks.

(h) The valuation of all material is now being carried out, but owing to the magnitude and the miscellaneous nature of the items to be dealt with, this work cannot be completed immediately.

Agent and Manager's Remarks.

(h) All material on hand without value is now being priced and brought on to the books.

(h) That all material now in hand without value be appraised and brought on the books and that a uniform system be adopted in future of bringing stores on to the books as returned at a fair market value in conformity with the orders contained in Government of India Resolution Nos. 213—218-A.G.R., dated 11th April 1874, and Government of India Circular No. IX (Railway), dated 1st May 1883;

That the only exception made to this rule shall be in the case of petty articles set aside for early auction;

(h) It is noted that the Company agree to this proposal, but a report should be submitted when the work has been completed.

Examiner's Remarks.

(j) That whatever system be adopted for the railway generally, whether of priced or unpriced accounts, it be applied to the Engineering as well as to the other departments;

Chief Engineer's Remarks.

(i) Unpriced ledgers will be kept in future for the sake of uniformity, as this is the system adopted by the Locomotive and General Stores Departments.

Agent and Manager's Remarks.

(i) The numerical system of ledgers will be adopted by the Chief Engineer to ensure uniformity.

Chief Engineer's Remarks.

(j) That occasion be taken when valuing and bringing surplus material of the Engineering Department in the books to re-value, and, if necessary, reduce the prices of articles which have been for years in stock or have from any other cause depreciated in value;

(j) This recommendation will be followed.

Agent and Manager's Remarks.

(j) With regard to this suggestion the Officiating Chief Auditor writes:—

"The Government Examiner's proposal to re-value, and, if necessary, reduce the prices of articles which have been in stock for years, &c., &c., can only be carried out if there be a surplus; otherwise lower prices will result in a debit to Revenue for 'loss on stores.' Moreover the proposal is wrong if it is to be applied to stores which are likely to be used on the railway. All such stores should be issued at their full value."

ii. With regard to Officiating Chief Auditor's remarks, I would point out that I only propose to reduce values, if "necessary."

iii. And further that I see no objection to articles standing on the books or being issued at their full "value," although there is, in my opinion, a very great distinction to be made between the terms "cost price" and "value."

iv. Again, I know of no orders prohibiting the adjustment of incorrect store balances when there is not a surplus on other items.

(j) i. It is noted that the Chief Engineer agrees to this proposal.

Examiner's further Remarks.

(i) It is noted that the Company agree to uniformity in system; but in the case of important articles, ledgers and store returns should be priced.

(k) That it be made clear that no important adjustment of store balances consequent on depreciation or alteration in value of stock or owing to excesses or deficiencies on stock or other causes shall be made without the previous approval of the Government Consulting Engineer, that stores shall not be made use of while standing on the store books and that actuals shall be given in stock lists of all articles of varying prices—*vide* paragraphs 8 (g) and 9 (f) and (g).

Chief Engineer's Remarks.

(k) The procedure prescribed for any important adjustments of store balances will in future be observed.

Agent and Manager's Remarks.

(k) Within reasonable limits this is accepted, but it is considered it should not apply to the half-yearly re-adjustment of prices which, if properly carried out, will work automatically; the latter part of the paragraph is undoubtedly correct.

(k) It is noted that the Company admit the suggestion made in this paragraph.

All adjustments will require the approval of Government when in excess of the limits prescribed in G.O., No. 1102 R., dated 19th August 1893.

(Signed) J. LIGHTFOOT,
Exr., Railway Accts.,
Madras.
18th January 1893.

Concluding Observations.

1. Before the opinion pronounced by the Government Examiner of Accounts can be unreservedly accepted, it will be necessary to briefly review the circumstances which have contributed to the results of which the system, so adversely criticised, has been the outcome; and sufficient consideration and allowance do not appear to have been given to the mode of procedure established and recognized for many years in this department, the comparison of which with the working of modern State lines, under altered and more favorable conditions, has probably led to the observations made by the Government Examiner.

2. Up to 1867 the accounts of the Engineering Department were under the exclusive control of a special covenanted officer designated "Engineering Accountant" supported by a separate staff of clerks by whom the entire work of checking and auditing the Chief Engineer's store accounts was efficiently performed, the whole details of such accounts being dealt with at head-quarters. In

1. My remarks have been based on many years' experience of Railway store accounts in England and on Guaranteed Lines in India, and not, as inferred by the Chief Engineer, from modern State Railway procedure entirely.

2. If the remaining books were now transferred to Audit or abolished, there would, in my opinion, be a saving in labour and expense.

Concluding Observations.

Examiner's further Remarks.

April of that year this appointment was abolished, the clerical staff considerably curtailed, and the bulk of the ledgers and books transferred to the Audit office—vide paragraphs XIV to XVII (inclusive) of the Proceedings of the Madras Government in G.O., Railway No. 41, dated 17th April 1867.

3. In 1879 a further reduction of clerks in the Stores and Accounts sections of the Chief Engineer's office was made in compliance with instructions from the Government of India—vide G.O., No. 737 R., dated 3rd September 1879.

4. In 1886 a special application for an increase in the number of clerks was made by this office owing to the demands from Government for additional returns required in regard to the value of stores, and the necessity for this increase was fully explained in this office letter No. 77/748 of 27th September 1886, to which I would invite reference, but sanction for this application was refused by the Consulting Engineer at the official meeting held on the 30th September 1886.

5. The establishment of the General Stores controls the receipt and issue of new materials and miscellaneous articles, and the repeated proposals to allow that department to deal with the stock of permanent-way and bridge materials have been rejected as inexpedient. Even so recently as the 17th April 1890, a special meeting, composed of the Chief Engineer, Chief Auditor and First Assistant Auditor, was held to consider the custody and valuation of permanent-way materials by the General Storekeeper. In recording this opinion, these officers stated "that experience in the past has shown that the

5. (i) In my opinion, departments should only have custody of special stores required for current use, and all other material should be borne on the books of the General Stores.

(ii) As regards returned stores, Government Orders contained in Government of India Resolution No. 213-A.G.R., of 11th April 1874, and Circular No. IX (Railway) of May 1883, contemplate the storekeeper taking over and valuing returned stores.

Engineer's Department has performed these duties and has kept a correct record of these stores; and they do not recommend any change to be made in the system in force on the Madras Railway, as the proposal put forward would not be so efficient or economical."

6. In the meantime, as the age of the line advanced the stock of old rails increased, but no market was found for them until 1890, and since then the numerous applications from the public for their purchase have been dealt with in the Chief Engineer's office, the value recovered and adjusted in the accounts. Owing to the injurious effect of the sea air on iron-work a large depot was formed at Arkonam for all permanent-way materials, to which were added the constantly recurring importations of stock of iron-work for strengthening small bridges, and these have all been in charge of the Engineering Department. Lastly, the reconstruction of the Pennar, Chitravati and Papaghni bridges in 1890-92 further increased the work at head-quarters, as the whole of the surplus plant, tools and materials as well as the iron screw-piles and girders of the old demolished bridges had to be dealt with by the Accounts section of the Chief Engineer's office.

This can be only realized when the magnitude of these new bridges, costing over an aggregate of 35 lakhs, is duly considered and weighed.

7. From this it will be seen that any system for dealing with this increased mass of stores and material, both new and old, can only be carried out efficiently by an adequate staff of clerks; but with the limited establishment available in this office it was decided with a view to ensure the most satisfactory results to keep such ledgers and records only as would suffice for the preparation of statements to be submitted half-yearly to the Audit office.

7. (a) If District and Workshop officers' returns are made complete, there seems to be no necessity for store accounts in the Chief Engineer's office.

(b) I have not made much complaint about departmental ledgers. My remarks have been directed against the incomplete

It is therefore concluded that the detailed statements asked for in many cases by the Government Examiner and not produced during his investigation of the accounts, are those which are only kept at the divisional office and not at head-quarters. It is pointed out that this system has been in force for over 25 years, the accounts as submitted had been approved by the Company's late Chief Auditor and no modification or change has been suggested by previous Government Examiners of Accounts up to 1st July 1890.

8. In support of this statement, and with special reference to the Terminal Workshop accounts, I desire to invite your attention to the report of the committee assembled in compliance with paragraph 2 of G.O. No. 292 R., of 22nd May 1880, "to investigate the existing system of management and accounts in the central (i.e., terminal) and divisional workshops" of this railway, embodied in G.O. No. 418 R., of 17th June 1881. This investigation was carried out by the Deputy Consulting Engineer and Government Examiner of Railway Accounts conjointly with a Company's officer deputed by the Chief Engineer, and no comment whatever was made on the system of accounts which was then found in force and adhered to up to 1890.

9. The fixing of a value to items of surplus or unserviceable stores opens up a very important question as it affects the Company's "Store balances." A large portion of this stock has been charged off to the divisions or works to which they were originally issued, and to now fix an arbitrary value on articles of plant, &c., for which there is absolutely no demand in the local market, will only tend to augment the amount of capital locked up in stores and render this figure more or less fictitious.

10. In this year the old system was replaced by the new one, under which every item of stores, whether new, second-hand, or unserviceable, is required to be brought on the books with a value, and this work is being carried out. But owing to the enormous mass of stores and accumulations of old and surplus stock to be thus treated, the work has occupied up to the present time, and will take probably to the end of the current year to fully complete as long as the existing inadequate staff have also to attend to the current duties of the office. The investigation of the Government Examiner was made at a time when the accounts were, as they still are, in a state of transition from the old system to the new; hence his inability to secure, immediately on demand, certain statements of details, inasmuch as these required special preparation and time to furnish.

11. In conclusion I desire to explain that every effort will be now made to write up to their full value all articles of which the book price was reduced under the old system; all omissions of adjustment in previous half-years will be rectified; the several recommendations of the Government Examiner adopted, wherever practicable, and I trust that, in consultation with the Chief Auditor, these improvements and modifications will be found fully introduced by the end of the current year. At the same time I would observe that under the old system of accounts the Company sustained no actual loss, for although the stock of stores in several instances were not represented by their money value, the materials themselves were always kept in safe custody and correctly recorded and could be fully accounted for in respect of number and quantity at any time.

state of the inventories and the disagreement of their totals with the Audit ledger balances.

(c) It seems to be considered a valid explanation on the Madras Railway to state that a practice has been in force for many years, although it can hardly be supposed that an Examiner is bound to perpetuate errors or omissions which may previously have escaped notice.

8. Do. do. do.

9. The value will of course be regulated by the demand, and if there is no likelihood of early sale, the estimated value should not exceed what the article may fairly be expected to realize at an auction.

10. Until my investigation commenced I did not observe any change in system. The pricing of old rails returned from the line had been introduced before I began to test the balances.

11. It may be noted that the Company will do all in their power to place matters on a sound footing.

Examiner's further Remarks.

12. The utilization of light broad-gauge material on metre-gauge lines would be advantageous, and Government no doubt contemplated such a possibility when they ordered surplus stores lists to be circulated to other railways and to Government departments.

Concluding Observations.

12. I take this opportunity of pointing out that, as a rule, railway plant and stores can only be utilized on railways and the failure in attracting purchasers by the repeated circulation of price lists of surplus and second-hand stock proves that no demand exists for such articles among the general public.

It is therefore suggested that the official advisers of Government should arrange for the transfer to newly projected metre-gauge lines of all surplus serviceable bridge materials found to be unsuitable for retention on the heavier or standard gauge railways. This was recently done, at the instigation of this office, when the South Indian Railway purchased and utilized some of Madras Railway girders at a bridge on their northern extension to the mutual advantage of both companies and with ultimate benefit to the State, and further action in this direction appears worthy of adoption.

(Signed) H. R. P. CARTER,
Chief Engineer.

(Signed) LOUIS S. MOSS,
Agent and Manager.

26th July 1893.

(Signed) J. LIGHTFOOT,
Examr., Railway Accts.,
Madras.

24th August 1893.

18TH SEPTEMBER 1893, No. 1220 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

REPORT by the Examiner, Railway Accounts, Madras, on the Engineering Store balances of the Madras Railway on 31st December 1891, dated 18th January 1893, No. 29.

Letter from the Agent and Manager, Madras Railway, dated 26th July 1893, No. 7457/645, with enclosure, commenting upon the above report.

A further note by the Examiner of Railway Accounts, Madras, on the same subject, dated 24th August 1893.

ORDER—dated 18th September 1893, No. 1220 R., Public Works.

The points requiring attention are noted below together with the orders Government considers it necessary to pass on each of the several questions raised:—

Subject.

- (a) Priced ledgers to be maintained (paragraphs 1 to 3 and 34 of the report).
- (b) Teak timber account [paragraphs 8 (d) to (j)].
- (c) Stores not to be made use of while standing on the store books [paragraphs 8 (g) and 34 (k)].
- (d) That all material now in hand without value be appraised and taken to account [paragraphs 8 (i) and (j) and 34 (k)].
- (e) Departments to retain charge only of special stores peculiar to their own requirements and stores of a general nature to be obtained from General Stores by indent as required [paragraphs 8 (k) and 34 (e)].
- (f) One timber stock to be maintained for the entire Railway instead of separate stocks for the Engineering and Locomotive Departments, or that the balance in each department be considerably reduced [paragraphs 8 (l) and 34 (b)].
- (g) The system of pendencies should be improved [paragraph 8 (m)].

Order.

- It is thought that the system suggested in (ii) sub-paragraph (e) of G.O., No. 1102 R., dated 19th August 1893, will meet all requirements in the Engineering Department.
- The orders passed in paragraph (g) of G.O., No. 1102 R., dated 19th August 1893, relating to the teak stocks of the Locomotive Department may be also applied to the Engineering Department.
- It is noted that the Company will abide by this ruling in future.
- (d) (i) Should be adjusted in terms of paragraph (iv) of G.O., No. 1102 R., dated 19th August 1893; and a report submitted showing the effect of the adjustment upon the suspense balances.
- (ii) Great care should, however, be taken not to place too high a value on articles not likely to be utilized or sold at an early date.
- (iii) In such cases, the value should not, as a rule, exceed what the articles might reasonably be expected to realize at auction or by sale as old metal, &c.
- (i) It is noted that the Company accept this suggestion.
- (ii) Under these circumstances, it may save labour if stores received from General Stores for direct issue to works be charged off direct without passing through the Engineering stock accounts.

The present system need not be altered; but it is hoped that the Company will keep the balances as low as possible consistent with efficiency.

- (i) This question is covered by paragraph (i) of G.O., No. 1102 R., dated 19th August 1893.
- (ii) The Government takes this opportunity of calling particular attention to the necessity for dealing with all transactions, as far as possible, in the accounts of the month to which they relate.

Subject.

Order.

- (A) Details to be given in stock lists of all articles of varying prices [paragraphs 9 (f) and (g) and 34 (k)].
- (i) Surveying instruments, old and new [paragraphs 24 and 23].
- (j) Abolition of system of keeping separate accounts for material obtained from particular districts or works [paragraph 28].
- (k) Old rails not included in valuation lists, Rs. 71,009 [paragraphs 31 (e) to (f)].
- (l) Error of Rs. 5,705 owing to delay in adjustments and to profits on sales [paragraphs 31 (g) to (h)].
- (m) Different rates to be fixed for returned serviceable and unserviceable permanent-way instead of adopting a uniform unserviceable rate for the whole [paragraph 31 (m)].
- (n) The audit ledgers and departmental balances to be periodically agreed and adjusted [paragraph 32].
- (o) All surplus and unserviceable stores to be borne on the books of the General Stores Department [paragraph 34 (c)].
- (p) That sub-divisional workshops, such as the Terminal, Telegraph, and District Engineers, be in direct communication with the Audit office on all matters regarding store accounts [paragraph 34 (d)].
- (q) That the Auditor should supply the Chief Engineer with all details he may, from time to time, require regarding stocks in hand, issues, &c., and that the existing Engineering Store Accounts office at Rayapuram be closed [paragraph 34 (e)].
- (r) That divisional accounts be simplified by the abolition of ledgers as far as possible, the whole of the store details being incorporated into monthly returns to the Audit office similar to those now in use for rails [paragraph 34 (f)].
- (s) Imprests in lieu of ledger-keeping at out-stations [paragraph 34 (g)].
- It is noted that the Company accept this ruling.
- (i) All instruments not forming part of the working plant of the several offices should be valued, and such as are not likely to be issued within a reasonable time should be treated as surplus stores.
- (ii) Instruments forming part of the working plant of officers should be included in numerical lists of tools and plant and omitted from valuation lists of stores in stock.
- It is noted that the Company has transferred all such items to the ordinary stock accounts.
- It is noted that these have now been brought into account and it is hoped such large omissions will not again occur.
- All necessary adjustments owing to reductions in prices of stores in hand should be made at the time of reduction in terms of paragraph c (v) of G.O., No. 1102 R., dated 19th August 1893, and all profits on sales should be adjusted as they arise.
- The Consulting Engineer will settle this matter after discussion with the Railway authorities.
- It is noted that the Company agree to make all necessary adjustments and attention is drawn to paragraph c (iv) of G.O., No. 1102 R., dated 19th August 1893, relating to the same subject.
- Government is of opinion that this system should be adopted as far as possible.
- It is noted that the Telegraph Department will in future communicate direct with Audit.
- As regards divisions and workshops, the views contained in paragraph 34 (d) (ii) and (iii) of Examiner's further remarks are accepted by this Government, viz—
- (i) That there would be no objection to accounts being transmitted through the Chief Engineer, but that officer would not probably require to maintain any stock ledgers.
- (ii) That each Divisional Engineer and Workshop Superintendent should be responsible for the stores in his charge and that the sum of the whole of the divisional stocks should agree with the aggregate balances on the audit ledgers in respect of engineering stores.
- This is covered by the last paragraph of preceding order No. (p).
- The Government considers this proposal desirable subject to the orders contained in paragraph (p) above.
- It is considered the system accepted by the Locomotive (vide G.O., No. 1102 R., dated 19th August 1893) should also be tried in the Engineering Department.

Subject.

Order.

- (f) System to be adopted in the Engineering Department, whether priced or unpriced accounts [paragraph 34 (i)].
- (u) Revaluation of articles owing to their having been in stock for many years or to their having depreciated in value [paragraph 34 (j)].
- (c) All important stock adjustments to be submitted for the approval of the Consulting Engineer [paragraph 34 (k)].
- (w) Consulting Engineer to arrange for the transfer of all surplus serviceable bridge material to newly projected metre gauge lines (paragraph 12 of concluding observations by Railway authorities).
- It is noted that the Company agree to uniformity of system in all departments, and Government has in G.O., No. 1102 R., dated 19th August 1893, already expressed its opinion in favour of priced records for important articles.
- This is covered by the orders contained in paragraph c (iv) of G.O., No. 1102 R., dated 19th August 1893.
- The orders passed in connection with c (v) of G.O., No. 1102 R., dated 19th August 1893, meet this case.
- The suggestion made by the Company's Chief Engineer is in conformity with the wishes of Government, and it was for the purpose of giving information to enable Government officers and other Railways to know what articles are, from time to time, available that the issue of surplus store lists was prescribed. It might, however, be of assistance if the Company noted against each suitable item some such remark as the following: "Recommended for use on metre gauge lines or on district works, being too light for broad gauge railways."

2. The orders issued on the papers now considered may be also acted on in regard to the stores of all departments so far as they may be found applicable.

3. Ordered that a copy of these proceedings be forwarded to the Government of India for information.

[Here enter No. 1221 R., dated 18th September 1893.]

(True Extract.)

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

To the Examiner, Railway Accounts.
" Agent, Madras Railway, through
the Consulting Engineer for Railways.

ENDORSEMENT—dated 18th September 1893, No. 1221 R., Public Works.

Forwarded.

(By Order.)

Joint Secy. to Govt., P.W.D.,
Railway Branch.

RAILWAY.

Govt. of {1893} Madras.
PUBLIC WORKS..

Dated September, 18th.

Recd.

Encl.

G.O., 18th Sept. 1893, Nos. 1220,
1221 R.

SEPTEMBER.

Store Balances

Forwarding copy of Proceedings on the report by the Examiner, Railway Accounts, Madras, on the Engineering — of the Madras Railway on 31st December 1891.

Examiner's Report.

In continuation of my report on the suspense balances of the Madras Railway Company, forwarded with my No. 429-G., dated 2nd September 1892, I have the honour to state that I have tested the stock lists of the Engineering stores prepared by the Madras Railway on 31st December 1891 and I further have the honour to report thereon as follows.

2. Before making the inspection I was informed that the system in force on the Madras Railway was for departments to keep numerical ledgers only and to periodically extract the numerical balances from the ledgers into stock lists, which lists were thereafter priced at current rates and the sum of the results compared with the aggregate balances on the Audit office ledgers.

3. Upon investigation, however, I discovered that the Engineering Department does not conform to this system, but keeps priced accounts.

It would appear most advisable that the store system in all departments should be uniform.

4. As a preliminary step to the test to be applied I asked the Auditor to furnish me with detailed lists of the stores said to be in stock and was accordingly shown the list annexed as appendix A, amounting to Rs. 9,00,059.

Replica of Railway Officers.

Paragraphs 1, 2 and 3.—In the system adopted in this office the ledgers are not priced ledgers so called, but merely books recording the total receipts and issues with values for each month for the information of the Chief Engineer.

In the preparation of the new ledgers the numerical system will be adopted and rate books kept.

Paragraph 4.—The amount of Rs. 9,00,059 shown in appendix A does not represent the value of all stores in stock at the date of the investigation but the balance standing to the debit of the Chief Engineer's Store and Workshops account on 31st December 1891.

Examiner's further Remarks.

Paragraphs 1, 2 and 3.—(a) It is doubtful whether any stock ledgers are necessary in the Chief Engineer's office.

(b) Each district and workshop maintains its own stock lists and the sum of their several totals should, if priced, make up the Audit office balance at debit of Engineering stores.

4. I was under the impression that I was being furnished with an inventory of the stock in charge of the Engineering Department on date, and if this is not what is periodically prepared and submitted in support of book balances, the system requires alteration.

To be attached to G.O. No. 1220-21-R

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Examiner's Report.

5. Upon examination of this list I discovered—
(a) that numerical details had been furnished only for items amounting to Rs. 7,14,863 (*vide* appendix B);

(b) that certain adjusting items, amounting to Rs. 10,696, had been added to the stock in hand (*vide* appendix C), also that the value of stores in hand had been unduly reduced by certain credit adjustments amounting to Rs. 20,467 (*vide* appendix C) and that the net result of these adjusting entries was an undue reduction of the value of the stock in hand by Rs. 9,771;
(c) that a large number of items of stock appeared in the lists without value;

(d) that unadjusted credit balances, amounting to Rs. 4,378, had been allowed to unduly reduce the value of the stock in hand at the Terminal Workshops;
(e) that the so-called stock lists were incomplete to the extent of Rs. 1,94,966, inasmuch as no numerical details had been furnished for certain items making up that amount and included in schedule D hereto appended.

6. After considerable trouble and delay I ultimately obtained details of all the items included in schedule D excepting an amount of Rs. 1,227, being the balance on the Watch Department account current; although small, this account should, like all other manufacture accounts, have been supported by numerical details of stock and lists of unfinished jobs.

Replies of Railway Officers.

Paragraph 5.—(a) Details were hitherto supplied for important items only, and as neither the Chief Auditor nor previous Government Examiners ever called for minor items, no record was consequently kept for supplying this information.

(b) The debits and credits taken exception to by the Government Examiner must necessarily appear as entered as they form part of the balance of the store and workshop account. Steps will be taken to reduce the number of such suspense items in future.

(c) It has been arranged that all items of stock on the divisions and in the terminal works without value shall be priced and brought on the books.

(d) This excess, amounting to Rs. 4,378, will disappear when the valuation of all unpriced items has been completed.

(e) The figure of Rs. 1,94,966 represents the value of the smaller items, details of which had never been previously submitted, but they will be furnished in future.

Paragraph 6.—The numerical details of stock and lists of unfinished jobs in connection with the sum of Rs. 1,227, being the balance of the Watch Department, could be prepared and furnished if demanded.

Examiner's further Remarks.

5.—(a) A re-perusal of appendix D will show that the items unsupported by numerical details were by no means unimportant, the item of old rails alone amounting to Rs. 1,07,694.

(b) It is noted that steps will be taken to reduce arrears of suspense items, and this, in my opinion, involves the necessity of invariably charging stores off in the accounts of the month to which they refer.

(c) It is noted that the Company agree to adjust these items. But a report should be submitted showing when it has been done and its effect on the balance of capital locked up in stores.

(d) Noted.

(e) Noted; but see note to paragraph 6 (a).

6. This, it is stated, has been subsequently prepared and submitted to Auditor—*vide* paragraph 24 (d).

7. Having thus obtained details I proceeded to test their accuracy and the following paragraphs will be found to deal with the various items of stock in their serial order of entry in schedules B and D.

8. *Stores at the Terminal Workshops valued at Rs. 89,853.*—(a) The Terminal Workshop stock contains the following important articles, the remaining items, although numerous, being small in value:—

Portland cement	...	...	7,889
Swedish iron	...	...	2,939
Round iron	...	...	1,812
Iron	...	...	4,918
Teak timber	...	...	40,159
" scantling	...	...	9,985
Machinery	...	...	7,102
		Overcharges Cr.	74,004
			69,831

(b) A large number of items appears in the lists without value owing to overcharges, adjustments, omissions, and pendencies, viz:—

Acid, hydrochloric	...	lb.	2
Base plates	...	No.	9
Bottom castings, C.I.	...	"	16
Brackets for lamp-posts	...	"	37
Brass, old	...	lb.	14
Chairs, C.I.	...	No.	860
Clips, C.I., for pot sleepers	...	"	2,669
Coal	...	lb.	6,612
Chloride of copper	...	"	2
Haudles, brass	...	No.	1
Iron, flat	...	lb.	6,892
" round	...	"	2,680
Nitrate of copper	...	"	2
Pipes, C.I.	...	No.	80
Pulleys for distant signals	...	"	209
Plates for screw apparatus	...	"	23
Rivets, iron	...	lb.	69,057
Shoes, C.I.	...	No.	11
Screws, W.I., for distant signals	...	"	110
Washers, galvanized	...	"	452
Wheels, angle	...	"	28

Paragraphs 7 and 8.—(a) No remark necessary.

7 and 8.—(a) No remark necessary.

(b) It is noted that these articles will be valued and taken to account.

Examiner's Report.

(c) Several errors were found to have been made in extracting balances from the ledger into stock lists.

(d) The teak timber account showed the following startling results as regards prices :—

	Per cubic foot.	
	Rs.	P.
Stock at commencement of December half-year 1891	1	14 3
Total receipts of half-year including stock in hand	1	11 4
Issues of period	2	5 0
Balance in hand at close of period...	1	6 4

From the above it will appear that the issue rate of the period has been much too high and that the stock in hand is some Rs. 7,000 to Rs. 8,000 understated owing to overcharges on issues.

(e) The teak scantling account valued at Rs. 9,955 was represented by a quantity of 4,503 cubic feet of scrap at an average price of Rs. 2-3-6 per cubic foot, which is higher than the value set upon good timber. i. This account in January 1891 started with a balance of 10,347 cubic feet valued at Rs. 18,320.

Replies of Railway Officers.

(c) It was noticed that a few trivial errors had occurred in making up the lists and they do not affect the book balance.

(d) The variation in the price of teak timber in stock and that issued is difficult to deal with, inasmuch as the price including shipping charges of this imported timber is not furnished to this department for some months after the shipment has been cut up and issued, and an average rate of previous shipments has to be taken in making charges against works; but this has always been adjusted as correctly as it was practicable after the receipt of the bill.

Our stock on 1st July 1891 stood at Rs. 1-14-3 per cubic foot, and during July 1891, 158-38-4-3 tons of timber were received; this timber cost Rs. 1-10-10 per cubic foot, but the October price list in which its value was included was not received till 18th November. Again tons 161-38-11-10 were received in November and charged for in December; the price of this second lot was Rs. 1-3-2 per cubic foot; in preparing the balance at 31st December all this timber at the lower price was added on to the stock, but the charges were received so late that the previous issuing price, Rs. 2-5-0, was maintained during the half-year. Hence the reduction of the balance per cubic foot on the 31st December.

(e) The quantity set apart as "scantling" can only be valued at first at the auction rate, but as demands for a certain class of work for which a portion of it can be utilized are met, the price of such portions is usually increased to nearer their correct value and a special adjustment in price accordingly made.

Examiner's further Remarks.

(c) It is noted that certain errors are admitted.

(d) i. This system should be remedied without delay.

ii. It is stated in another paragraph of the report that the large stocks now maintained are necessary to allow timber to be seasoned, and yet in the paragraph now under consideration it is stated that timber has time to be cut up, issued, and, it is presumed, seasoned, before its price can be ascertained.

(e) The reply of the Chief Engineer in this and subsequent paragraphs only confirms me in my previous opinion that the system requires revision by having the actual quantity of scrap periodically measured and taken into stock at a fair valuation.

ii. Without any special authority, however, Rs. 8,730 were written off to Revenue expenditure in June half-year 1891 and the value of the stock was thereby reduced to Rs. 13-9 per cubic foot.

iii. 6,600 cubic feet were thereafter sold by auction at Rs. 4-2 per cubic foot in July, but no adjustment was made of the difference in value between Rs. 4-2 and Rs. 13-9. The balance on the account therefore remained at the excessive rate of Rs. 2-3-6 per foot on 31st December 1891.

iv. Of the stock of 4,600 feet in hand on 31st December 1891, 4,100 cubic feet were sold by auction in January 1892, realizing Rs. 1,175, or Rs. 4-7 per cubic foot, and the value of scantling would therefore appear to be overstated by more than Rs. 8,000, unless, as is very probable, the actual quantity in hand is far in excess of the book balances owing to the faulty system adopted in the sawing account.

(f) Timber is accounted for under the following system :—

i. Certain logs are allocated to particular works and cut up.

ii. The actual measured outturn is then increased by 50 per cent. and charged to the several works. This addition of 50 per cent. to the quantity of the cut timber is based on an assumed wastage of 33 per cent. on the original capacity.

iii. A summary is made of the quantity charged to all works during the month and the difference between this total and the measured capacity of the

The stock of cubic feet 10,347 on 1st January 1891 stood at Rs. 1-12-4 per cubic foot and the 1,605 cubic feet of scantling taken into stock during the year at Rs. 2-5-0 per cubic foot, while the sales realized 5 annas only per cubic foot or about one-seventh of this latter figure. The sum of Rs. 8,730 was therefore written off against Revenue, but this appears to have been insufficient, for, notwithstanding this reduction, the balance at the end of the year, viz., 4,502 cubic feet, was found to stand at Rs. 2-3-6 per cubic foot or more than seven times the selling price. Hence the assumption on the part of the Government Examiner that the value of scantling was over stated by some Rs. 8,000.

The value of Rs. 2-5-0 per cubic foot fixed upon scantling is attributable to the fact that, under the system then in force for adjusting the timber account, any loss not covered by the 50 per cent. allowed in cut timber was thrown on to the scantling, but this method has now been rectified.

(f) i. Certain logs are not allocated to particular works, but a number of logs are put on the saw-pit and orders are cut from them in the most economical manner.

ii, iii, iv, v, vi. The system of dealing with timber is not correct for each individual log, because as stated in the report the 60 per cent. added to the outturn does sometimes exceed the actual capacity of a log, but in other logs the 50 per cent. does not cover the wastage.

The excess in the one case makes up for the loss in the other.

See remarks against para-graph (e).

This appears to be a fact rather than an assumption.

See remarks against para-graph (e).

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Tabley

Examiner's Report.

Logs consumed is debited to an account called "Duggies and Scantlings," thus:—

	FT. IN. PARTS.	FT. IN. PARTS.
Log No. 69/1918 contents ...	36	1 6
Cut up beam, order No. 929 ...	23	6 6
Add 50 per cent. ...	11	8 9
	35	2 3
Charge to duggie and scantling ...	0	11 3
	36	1 6

iv. This system of dealing with scantling or (as it would be more accurately described) "scrap" is manifestly incorrect as the quantities brought to account never agree with the actual results of sawing. v. In some cases, the actual output *plus* 50 per cent. exceeds the capacity of the log cut up, and, in such cases, no scrap timber is taken to account although there must necessarily be some.

vi. The following summary of a month's transactions will show to what extent the system is erroneous:—

	C. FT.
30 logs containing ...	1,715.
When cut up yielded, ...	1,050
And the scrap, and saw-dust originally measured ...	665
or 38 per cent. of original quantity.	
Of this 665 feet, 50 per cent. of 1,050 or 525 cubic feet were added to the output and the scantling account was debited with 140 feet only; 525 cubic feet of scrap have therefore been omitted from the accounts.	

Replies of Railway Officers.

Examiner's further Remarks.

8 (f) vi. This was owing to abnormal wastage from certain of the logs which were found to be unsound when cut up. See remarks against para. (c).

vii. As a proof of the error in system, it would appear from the accounts that during a period of 9 months between January and October 1891 there was no debit to the scrap account although the sawing operations were considerable.

viii. The proper course to adopt would be to periodically measure and value the scrap after fixed sets of sawing operations and to charge works with the value of the original logs less the estimated value of scrap recovered and taken into stock.

(g) Included in the item of machinery as stock in hand is a vertical boiler valued at Rs. 2,455, which is old and in use in the workshop. It is irregular to treat articles in use as in stock and ostensibly available for issue and sanction should apparently be obtained to charge this engine off to works.

(h) The overcharges of Rs. 4,373 have already been alluded to in paragraph 6 (d) and paragraph (b) of this section; they are mainly due to errors in pricing and have affected the stock lists in double directions, inasmuch as no value has been given to the numerical quantity on hand, while a reduction of totals has resulted from entering the credit balances.

(i) In addition to the items referred to in paragraph (b) of this section as stores in stock without value, owing to overcharges and errors in pricing, there are also considerable accumulations of stock in hand, which have never been priced at all owing to a want of system in dealing with returned stores.

vii. During the 9 months mentioned, if the actual outturn during that period be increased by 50 per cent. and the sum so obtained subtracted from the contents of the logs cut, there ought to have been a balance of 1,800 cubic feet to be taken into the scantling account.

The reason why no timber was taken into the scantlings account was that the 50 per cent. allowed did not cover the actual wastage and what timber did remain was very inferior scrap and as such was used as fuel for the workshop engines.

viii. I am satisfied with the present method of dealing with the teak timber and am of opinion that by means of periodical adjustments for wastage the prices are regulated as accurately as possible.

Paragraph 5.—(g) Sanction will be applied for to charge off the vertical boiler to the workshops now that it has been tried and tested and found suitable for the work.

(h) The explanation as regards this item has already been given under paragraph 6 (d).

(i) and (j) The returned stock of plant and stores was examined and priced by the Deputy Chief Engineer, assisted by the Engineer-in-charge of Terminal Works and the Superintendent of the Terminal Workshops.

See remarks against paragraph (e).

See remarks against paragraph (e). No scrap should be used as fuel unless paid for at a fair valuation.

viii. I retain my original opinion.

(g) It is noted that sanction will be applied for.

(h) Noted.

(i) and (j) This must refer to some recent operation. My original statement was correct at the time my report was framed.

Examiner's Report.

(j) Under these circumstances, neither the priced stock lists submitted nor the balances on the Audit office ledgers accurately represent the amount of capital locked up in stores, while the possibility of speculation is much enhanced by the absence of priced records. It would appear advisable to bring all material belonging to the Company upon its books at a fair value based at the very least upon the price it might reasonably be expected to fetch at auction.

(k) With a General Store adjacent to the Terminal Workshop at Kāyapuram, it would further appear inadvisable to keep a separate engineering stock of many of the items of a general nature now borne on the lists of the Engineering Department.

(l) It would also seem inadvisable with large timber stocks (which roundly amount to a value of Rupees 2,70,000) maintained in the Locomotive Department to keep up such a large further separate engineering stock of Rs. 50,000.

Replies of Railway Officers.

(k) The General Stores Department deals with new material only, and when this has been once issued, the storage and ultimate disposal of such material devolves on the department to which it is issued. The General Stores Department moreover is not in a position to take up this work and the staff at the head-quarters of the Engineering Department has been too limited to cope more expeditiously with the labour involved in dealing with the large mass of plant and stores returned from the Pennér, Chitravati and Papagni bridges in addition to the ordinary routine work in connection with items returned from the open line.

We never indent for any material from the General Stores in excess of what is required for actual use.

Our stock now consists chiefly of plant and old iron of a miscellaneous description returned from divisions. The latter will be disposed of at auction.

(l) From past experience it has been found essential to keep the timber stocks of the Engineering and Locomotive Departments separately.

The description and dimensions of logs required for the former will not meet the requirements of the latter department; any amalgamation of either the stock or the accounts would lead to confusion and needless correspondence; besides the stock of timber for the Engineering Department must be retained at Rāyapuram, whereas that for the Locomotive Department is removed to Perambur Works, 4 miles away.

Examiner's further Remarks.

(k) I am still of opinion that the General Stores should be in charge of all stores of a general nature.

It is noted the old iron will be disposed of by auction.

(l) This is of course an executive question.

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(m) Certain items appear in the receipts and issues without price and are called pendencies. These, it is said, are owing to the prices of the supplying department not having been received.

In some cases, these pendencies were three and four months in arrear, and in the case of one article it was noticed that the transactions of December had been priced, while those of the preceding months of October and November were still left pending.

Some arrangement would appear to be necessary to improve the system of pendencies.

9. *Permanent-way materials* (Rs. 5,40,896).—(a) The quantities and amounts in this list have been compared with ledgers maintained in the Chief Engineer's office and with the divisional returns and found correct, except as regards the item of fish-plates, which are 528 short stated.

(b) The quantities in the stock list have, in the case of important articles, been divided into their value for the purpose of ascertaining the rate per unit of stock in hand.

(c) These rates have then been compared with the market values current at the time for similar articles and with the rates at which the articles were being issued with the following results:—

	Stock value.		Issue rates.		Market prices.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
Ball, steel, 20 feet	..	..	16 11 3	14 12 7	..	..
" " 17 "	..	..	11 14 4	11 13 10	..	..
Flat sleepers	..	..	3 3 4	3 3 7	..	..
Tie bars	..	..	1 1 6	1 1 10	..	..
Fish plates	..	..	0 7 11	0 8 4	..	..
" bolts	..	..	0 1 7	0 2 0	..	..
Track keys	..	..	0 0 6	0 0 6	..	..

(m) Pendencies are unavoidable inasmuch as material is received from General Stores and the Locomotive Department in one month, while the charges for the same are not furnished for frequently two months afterwards and during the interval the items stand in the books without value. It is understood that the prices of such items cannot be furnished in a shorter time.

I am not aware to which particular item the Government Examiner refers. If any such item was not priced for October and November, while that for December was, it must be because the charge for the previous months was not received in this office from the department issuing the material.

Paragraph 9.—(a) The 528 fish-plates noted as short stated were issued by the General Stores in December 1891 and were brought into stock at the Arkonam depot in January 1892 and adjusted.

(b) No remark necessary.

(c) The rates at which these articles of permanent-way material were being used are as correct as it is practicable to fix them.

(m) It is presumed that similar improvements will be introduced to those promised in the Locomotive Department.

The item in question was "Bushes, brass."

9.—(a) It is noted that this error is admitted and adjusted.

(b) No remark necessary.

(c) No remark necessary.

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Rathaswamy

Examiner's Report.

(d) With the exception of fish-plates and fish-bolts, which require revision, the rates seem to be as nearly correct as is possible on a system of averages.

(e) The stock of teak keys seems large, it being sufficient for 100 miles of track at the rate of 4,000 per mile; but I am informed it is only sufficient for one year's requirements.

(f) Certain of the items in the lists, such as wooden sleepers, switches, &c., are not capable of check in consequence of one general entry having been made for material of greatly varying prices. For instance, teak sleepers are issued at rates of Rs. 28, Rs. 21, Rs. 15 and Rs. 12, respectively, according to size, whereas they are shown in the stock list in one item which works out to an average rate of Rs. 16-13-1 per sleeper.

(g) The quantities of each class of sleeper or other article of store should have been detailed in the stock list and worked out at its own rate and the sum of the whole compared with the aggregate ledger value. This should be noted in preparing future lists.

10. *New permanent-way material and iron work for strengthening bridges, viz.:*—

Permanent-way, schedule B	Rs.	Rs.
" " " " " "	61,597	
Bridges, schedule D	22,909	84,506
		16,909
		1,01,415

These items represent special English invoices for rails and cross beams obtained for strengthening bridges and are correct in the aggregate although some of the detailed entries in the ledger and lists are inaccurate.

Replies of Railway Officers.

(d) The price of fish-plates and fish-bolts has since been revised.

(e) The stock of teak keys retained is sufficient for one year's requirements, and from experience it is found inadvisable to keep a less quantity.

(f) and (g) The wooden sleepers and switches are shown in bulk in the ledger at head-quarters, but they are fully classified as regards size in the divisional stock lists. They will be shown separately in future half-yearly stock lists.

Examiner's further Remarks.

(d) It is noted that the error pointed out has since been rectified.

(e) This is an executive question and the explanation appears satisfactory.

(f) and (g) It is noted that the Company agree to submit correct inventories in future.

10. I have no further remarks to offer beyond stating that my report does not complain so much of errors in the Chief Engineer's ledger as of incorrect entries in his priced inventory.

I agree; but such entries as are made should be accurate.

11. Twelve 35-feet W.I. girders (Rs. 4,865-10-0).—These are said to be an emergency stock and are at present located in the following divisions, although they are not borne on their stock lists:—

South-West Line, 2nd division	...	4
North-West " 1st "	...	4
" " 2nd "	...	4
Total	...	12

12. One 24-feet W.I. girder (Rs. 200) has been in Arkonam depot since December 1888.

13. One 14-feet 6-inches W.I. girder (Rs. 91-9-1).—This is a part of the emergency stock and is lying on 4th division, South-West Line.

14. Seventy-two cast-iron girders at Perambur (Rs. 3,445).—These have been in stock since 1885 having been ordered for roofing the carriage shops. Their value has been reduced by about 40 per cent. of the cost price.

15. Two sets of 14-feet 6-inches girders (Rs. 470).—These are lying on 1st division, South-West Line, and are priced at half value, being returned stores.

Paragraph 11.—These girders are shown separately in the special emergency stock lists which are specially scrutinized with a view to keeping them complete in all respects to meet demands in case of accidents. They will in future be included in the divisional stock lists.

Paragraphs 12 and 13.—These form part of the emergency stock

Paragraph 14.—These 72 cast-iron girders are intended not for the roof but to replace those on which the travelling crane runs in the carriage shops. These are kept in stock as the existing girders, which are liable to fail at any time, have to be renewed promptly to save interruption to the works. Their value, which was reduced under the old system by the credit received from sales, will now be restored to its original figure.

Paragraphs 15, 16 and 18.—These items will now be written up to their full value. The fourth turn-table is borne on the books without value as it is very incomplete and can only be priced at a nominal figure.

11. Noted.

12 and 13. Noted.

14. Noted.

15, 16 and 18. Noted.
The fourth turn-table might be valued as old iron.

Examiner's Report.

16. *Four sets of W.I. girders, 139 feet 10 inches (Rs. 8,930) and charges thereon (Rs. 2,600-7-1).*—These have been returned from works and strengthened for use on other bridges.

17. *Two engine turn-tables (Rs. 1,500).*—These have been in stock since 1857; their original cost was Rs. 8,769 and they are of 50 feet and 40 feet diameter, respectively.

18. *Three wagon turn-tables (Rs. 1,500).*—These were received from England in 1848; a fourth turn-table is borne on the books without value.

19. *Six water-columns (Rs. 920).*—The divisional stock lists show four only, two having been issued and not charged off till next half-year.

20. *One engine turn-table at Podanūr (Rs. 1,500).*—This is not in the stock lists of the division, it having been condemned and taken to pieces and the component parts made available for renewals. It is stated the item will be cleared off the stock in June 1892.

21. *One air-pump (Rs. 630) and two hand pumps (Rs. 1,024).*—These items call for no special remark.

22. *Surveying instruments (Rs. 540).*—The details furnished in support of this item are shown in schedule E.

Considering that the list contains 25 theodolites, 35 levels and 12 boxes of mathematical instruments, their value seems ridiculously small. It would appear necessary to set apart the instruments forming the working plant of the several offices and to re-value the remainder and treat them as surplus stores.

23. *Surveying instruments, new (Rs. 203).*—These are not in the engineering books and are in custody of the General Storekeeper, although the storekeeper does not include them in his list of articles warehoused for Engineering Department (*vide appendix H.*)

Replies of Railway Officers.

Examiner's further Remarks.

Paragraph 17.—Both these engine turn-tables have been charged off, one to Arkonam and the other to Renigunta; and the old ones they replaced are too much deteriorated to offer for sale except as old iron.

17. In this case they should be borne on the books at old iron value till disposed of.

Paragraphs 19, 20 and 21.—call for no remarks.

19, 20 and 21. No further remarks to offer.

Paragraphs 22 and 23.—The greater portion of these surveying instruments were charged off when they were originally issued to the several divisions over 30 years ago and these appear without value; some of them returned to store are valued at a nominal figure as they were of an obsolete type and much deteriorated.

22 and 23. It is noted that the Company is re-valuing the stock in terms of my suggestion.

Some have been sold during 1892, and some of the material has been entered in the surplus stock list. I am having the remaining stock carefully examined and whatever is found unserviceable will also be entered in the surplus stock list.

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M. S. S. S.

A system of retaining the value of an article in the list of one department and the quantity in that of another may lead to the inclusion of the articles in the stock lists of both departments.

In my opinion all stock which is not likely to be required for any considerable period should be borne on the books of the General Storekeeper and indented for by departments when required only.

24. *Telegraph stores* (Rs. 20,503), *watch materials* (Rs. 1,227.)—(a) These stocks should, in my opinion, be kept separate from engineering store and accounted for direct to audit, as they appear to receive very little scrutiny from the Engineering Department; it is further doubtful whether separate store accounts are necessary to so large an extent as now maintained.

(b) The stock list of the Telegraph Department consists of some 200 to 300 items, many of which might possibly be obtained from General Store as required.

(c) As a proof that the present system is unsatisfactory, it may be stated that two of the items included in the list of stores in hand on 31st December 1891 were the following, viz:—

Proportion of general superintendence	Rs. 684
" of home payments	237
Total	921

These are not represented by anything of tangible value, being debits which should have been added from time to time to the cost price of stores.

This sub-division having been neglected, the debits have been accumulating since 1889 and treated as stock in hand.

Chief Engineer's Remarks.

Paragraph 24.—Dealt with separately by Telegraph Engineer.

Agent and Manager's Remarks.

With reference to paragraph 24, the Acting Telegraph Engineer has been communicated with and in future he will be careful to indent on the General Stores for the ordinary stores he may require. Such items as those referred to in paragraph 24 (c) will not appear in the Telegraph store account in future.

24. It is noted that the stocks of the Telegraph Department will be reduced to a minimum and that the errors pointed out will be adjusted.

<i>Examiner's Report.</i>	<i>Replies of Railway Officers.</i>	<i>Examiner's further Remarks.</i>
(d) The absence of details regarding watch materials has been referred to in paragraph 6.	With regard to paragraph 24 (d), the Acting Telegraph Engineer states that he has furnished the Chief Auditor with the details regarding the watch materials.	Noted.
25. <i>Stores in hand on account of station machinery (Rs. 13,425) and points and crossings (Rs. 2,353).</i> —These represent certain stocks held by inspectors and contain many items which might be obtained and charged off as required. They further do not include the whole of the stock of the classes they nominally represent, as the bulk of the stock is included under the head "Permanent-way."	Paragraph 25.—In future, items from General Stores will only be indented for as required by the inspectors of the branches named.	25. It is noted that the stocks of the inspectors of station machinery and of points and crossings will be reduced to a minimum.
26. <i>Brick-making stock (Rs. 2,000).</i> —This stock is duly supported by divisional balance sheets. In the case, however, of stock in the Terminal Workshops, the balance brought forward is valued at Rs. 12 per 1,000, the issues therefrom have been made at Rs. 15 per 1,000 and the stock in hand reduced to a value of Rs. 7 per 1,000 in consequence of the apparent overcharges.	Paragraph 26.—The value of the stock of bricks appeared as Rs. 7 per 1,000 in December 1891 in consequence of an overcharge in that half-year; this was subsequently adjusted and the present rate stands at cost price.	26. It is noted that the Company have corrected the error.
27. <i>Unfinished works on the Terminal Workshops (Rs. 474).</i> —These are supported by detailed lists extracted from the works ledgers; on comparing these lists with the books several petty inaccuracies were discovered, while the writing up of the books was considered to be capable of much improvement.	Paragraph 27.—The writing up of the books will be attended to and improved.	27. Noted.
28. <i>Permanent-way materials taken out between Beypore and Kadalundi (Rs. 1,283).</i> —(a) On completion of the Calicut extension certain old material was credited to the work at half price amounting to Rupees 23,818. (b) Instead of bringing the articles on to the ordinary stock accounts according to nomenclature,	Paragraph 28.—(a), (b), (c), (d), (e) and (f). These Permanent Way materials were taken out of the abandoned portion of the line between Kadalundi and Beypore and were originally kept in a separate account which has now been closed, the items being transferred to the several heads in the ordinary returns will now appear at a fair valuation.	28. It is noted that the Company will transfer these items to their proper account heads at a fair valuation.

they were kept on a separate account and as issued or sold the value realized was credited in reduction of the Rs. 23,818.

(c) The credits so made have reduced the account to Rs. 1,283 as shown in the stock lists.

(d) Upon applying for details of the items comprised in the balance of Rs. 1,283, I was furnished with the list hereto annexed as appendix F, which, if priced, will make up a value far exceeding the Rupees 1,283, at which they are borne on the books.

(e) The items included in this list should be valued and transferred to their proper heads in the ordinary returns.

(f) The system of keeping separate accounts for material obtained from particular districts or works is complicated and unnecessary.

29. *Surplus stores remaining at Terminal Workshops (Rs. 954).*—This quotation has already been touched upon in paragraph 8 (i) and (j). A list of the items comprised in the item of Rs. 954 is annexed as appendix G and a further list of unvalued articles belonging to the Engineering Department and warehoused in the General Stores Department without value on 31st December 1891 is annexed as appendix H.

It is impossible to state which of the particular articles comprised in these lists make up the assumed value of Rs. 954, but there is little doubt that they would realize five or six times that amount.

30. *Screw-piles (Rs. 4,390).*—Six hundred and ninety-three screw piles recovered from bridges were in June half-year 1891 returned into store at a rate of Rs. 10 per 35 lineal feet, 35 lineal feet being a ton or thereabouts. The ordinary sale rate for iron scrap is about Rs. 20 per ton and these screw-piles are therefore considerably undervalued.

Paragraph 29.—This has been explained in the remarks under paragraph 8 (i) and (j).

29. No further remarks, as the Company has agreed to re-price all stock at a fair market value.

Paragraph 30.—These screw-piles were taken into stock at a nominal value of Rs. 10 per ton as they are unsaleable. They cannot be considered as equivalent to ordinary iron scrap as they are of solid iron 35 feet long and 6 inches diameter and the labour of cutting them into pieces to convert them into scrap would be very costly.

30. No further remarks, as the Company has agreed to re-price all stock at a fair market value.

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V. Kameswari

Examiner's Report.

31. Old rails (Rs. 1,07,694).—(a) This amount is made up as follows:—

	60 lb.		75 lb.		44 lb.		Total	
	57	17	57	17	57	17	57	17
Stock at the Terminal	8,725	88	4,400	63	1,015	15	14,208	117
Stock on divisions as per	4,310	79	5,400	208	668	27	10,446	235
Account current.								
Stock at Port.	578	71	219	15	4	13	800	88
Total	13,713	238	10,019	286	1,087	55	25,127	240

* Total is 4,777 tons at 8 rails a ton at Rs. 22 per ton.

† At Marapuram.

‡ Distributed on the several divisions.

§ At Port station.

(b) Upon investigation, it, however, transpired that this did not represent the entire stock of old rails belonging to the Company.

(c) Under G.O., No. 1779 R., of 15th November 1890, some 7,000 tons of old rails were ordered to be brought on the books, but, instead of doing this at once and in one item in the divisional returns, the rails in question were roughly dealt with in the returns of the head office with the result that the stock on the line is worth about Rs. 71,000 more than shown in the Company's stock lists as may be seen from the following table made up by pricing the actual stock included in the unpriced returns of the several divisions.

84 lb. rails, 51,673 feet, at Rs. 7 per 20 feet	Rs. 18,088
75 lb. rails, 206,600 feet, at Rs. 6 per 20 feet	61,980
63 lb. rails, 394,784 feet, at Rs. 5 per 20 feet	98,695
Total	1,78,763

Replies of Railway Officers.

Paragraph 31.—(a) to (m) Prior to July 1890 all old rails stood "without value" and as they were sold the amounts realized were credited to the stock of new rails, thereby reducing the value of the latter.

On the 1st July 1890, orders were issued to the divisional engineers to open an account of old rails removed from the line from that date and to send to Madras and Kallai all the old rails taken out from the line and in stock previous to that date. This necessarily occupied some time to carry out, but these rails were valued as the several instalments were received, and in order to cover the large sales of old rails during the second half of 1890 and first half of 1891 the lump sums given in (d) were entered to the debit of the store and workshop account, these sums being based on figures slightly below the estimated quantity which were expected to be received in those periods. All the old rails dealt with prior to July 1890 have now been accurately brought to account and the store balance on 30th June 1893 will show correct details worked up to actuals under this head. In addition to this the rails removed from the line subsequent to July 1890 have been brought into the accounts monthly.

The amount of Rs. 71,069 referred to by the Government Examiner represents the balance of old rails removed from the line prior to July 1890 and not brought to account until 1892.

Examiner's further Remarks.

31.—(a) The Company admit the error of Rs. 71,069 or thereabouts and state that it has been adjusted.

(b) No separate allusion is made to the error of Rs. 5,705 in pricing new rails, but this will be covered by the re-valuation suggested by the Company.

(c) The important question of valuing returned rails when fit for use in main line at a different rate to those which are useless for that purpose has not been touched upon.

(d) The entries made in the head office returns from time to time were arbitrary estimates unsupported by any detail quantities as may be seen from the following :—

October 1890	...	...	...	64,000
December 1890	...	...	...	70,000
June 1891	...	...	...	10,000

(e) No ledgers of quantities were maintained in the head office in respect of old rails, and, although quarterly unpriced lists have been prepared and submitted by district officers, no attempt seems to have been made to make these agree with the head office returns or with the stock lists.

(f) In my opinion the whole of the rails in the custody of district engineers should be at once brought on the priced divisional returns as the present system is most irregular.

(g) I further discovered with regard to the stock borne on divisional priced returns and said to be worth Rs. 43,942 that at the rates in force for return of old permanent-way material [vide paragraph (f)] the quantities entered on the lists only work out to Rs. 38,237.

(h) The difference of Rs. 5,705 is due to the fact that the stock at the commencement of the year was valued as follows, viz.:—

65 lb.	...	...	...	...	8
75 "	...	...	...	...	9
84 "	...	...	...	...	10

(i) Under authority of minute No. 7 of 1891, however, the future issue rates were reduced to Rs. 5, 6 and 7, respectively, resulting in a reduction of about Rs. 16,046 in the value of stock; but no adjustment of this item was made in the books.

Examiner's Report.

(c) This deficiency has been almost adjusted by means of the augmented prices obtained from public sales (*vide* paragraph f) and will by this means ultimately be wiped off.

(d) Such adjustments should, however, in my opinion, be made by debit to Revenue as soon as sanctioned and not allowed to remain in arrear until adjusted by the transactions of subsequent periods.

(f) The following table will show the value allowed for returned 20-foot rails as compared with cost price:—

Rails.	Rate at which brought on to stock.	Cost of new material on basis that a 7½ lb. rail of 20 feet costs Rs. 16, other sizes being proportionately increased or reduced.	Rate at which sold to public.
65 lb.	Rs. A. P.	Rs. A. P.	Rs. A. P.
75 "	8 0 0	13 0 0	8 12 0
86 "	7 0 0	16 12 10	10 0 0
			11 4 0

(m) The rates allowed for returned rails do not average half value, and, as some rails, when recovered, must be fit for use in the main line, it would appear advisable to sub-divide returned rails into serviceable and unserviceable and quote a separate rate for each instead of adopting, as at present, an unserviceable rate for the whole. It should further be remembered that the rate quoted for new material is calculated at 1s. 10d. to the rupee and that for sale purposes this rate would require to be increased by about 50 per cent. to provide for the current rate of exchange. The rate realized by sales of old material is about 4/9 of this augmented price of new material and would therefore appear to be a very good one.

Replies of Railway Officers.

Examiner's further Remarks.

(k) This point has not been touched upon in the Company's reply.

(m) Ditto.

32. *Comparison with Audit Ledger.*—(a) The stock in hand as per lists originally submitted by the Chief Engineer amounted to Rs. 9,00,069 compared with Rs. 8,78,923 standing on the Audit office ledger resulting in an excess of Rs. 21,136 over the Company's books.

(b) This excess in the course of investigation has been augmented to the following extent, viz.:—

Original excess	Rs. 21,136
Add—	
Adjustments [vide paragraph 5 (b)]	9,771
Credit balances [vide paragraph 2 (d)]	4,378
Permanent way [vide paragraph 31 (e)]	71,069
Teak timber [vide paragraph 5 (d)]	8,000
Less—	1,14,349
Boatling [8 (c) iv.]	...
Permanent way [31 (e)]	...
	8,000
	5,705
	13,705
Net apparent excess of stock over Audit office balances	1,00,644

(c) The above excess would be still further augmented if the whole of the unpriced stock were brought to account and certain articles now standing at very low rates re-valued.

(d) Again the Engineering head office ledgers had not at the time of my inspection been posted for the June half-year 1892 and the books were therefore practically useless as stock records.

33. *Conclusion.*—The foregoing remarks lead me to express the opinion that the state of the Engineer's store accounts is far from satisfactory, especially as regards returned stores, and further that the existing system does not provide for a sufficient control by the Auditor of the Company.

Paragraph 32.—The excess of stock over Audit office balances will be adjusted, as the Chief Auditor proposes, after the investigation of the General Stores has been completed. In the meantime, I am having all our stock of stores without value priced and brought on to the ledger, and from January 1893, the system of posting the ledger monthly immediately after the submission of the monthly accounts has been adopted.

32. It is noted that the Company agree to make all necessary adjustments.

Paragraph 33.—With respect to the concluding remarks—paragraph 33 to the end—I would beg to observe that the Chief Auditor considers the existing system does not prevent control by his office, but for years no one has been available to look into this work. It is now hoped that henceforth he will be able to depute an officer at regular intervals to do so.

33. It is noted that more attention will be devoted to the Engineering stores by the Audit office.

Examiner's Report.

34. In my note No. 421-G., dated 2nd September 1892, an extract from which is given in appendix I, I called attention to certain apparent defects in the general system of stores on the Madras Railway, and I would now further suggest that all stores of an important nature should be borne on priced ledgers kept in the Audit office and that the numerical system should only be allowed to apply to articles which are small in value, although numerous in quantity; also

(a) That the Engineering and other departments retain charge only of special stores peculiar to their own requirements and that stores of a general nature be obtained from General Stores by indent as required;

(b) That one timber stock be maintained for the entire railway instead of separate stocks in each department or that the balance in each department be considerably reduced;

(c) That all surplus and unserviceable stores be borne on the books of the General Store although the department concerned or a committee of experts would naturally fix the prices of such articles and be consulted before they were disposed of by sale;

Agent and Manager's Remarks.

Paragraph 34.—It is considered desirable that the Chief Engineer should keep his own accounts.

Chief Engineer's Remarks.

(a) Measures will be adopted in future to indent on General Stores for materials as required.

Agent and Manager's Remarks.

(a) The Chief Engineer accepts this suggestion.

Chief Engineer's Remarks.

(b) As already explained under paragraph 8 (2) this is not practicable. The stock of timber for the Engineering Department suffices to meet the demands for one year only and therefore cannot be reduced.

Agent and Manager's Remarks.

(b) The stock of timber cannot be reduced. Large stocks are required to admit of properly seasoned timber being used. The Chief Engineer points out the disadvantages of keeping one stock only [vide paragraph 8 (c)].

Chief Engineer's Remarks.

(c) It is understood that the General Stores Department is not in a position to deal with this work, and past experience has proved that it can be more satisfactorily controlled by the Engineer's Department.

Examiner's further Remarks.

34. See my note to paragraph 1. It is doubtful whether any stock accounts are necessary to be kept in the Chief Engineer's office.

(a) i. It is noted that the Company accept this proposal.

ii. Stores withdrawn from General Stores for actual use need not be passed through Engineering stock account as they can be debited direct to works.

(b) I have no further remarks to offer.

(d) That sub-divisional workshops, such as the Terminal and Telegraph and District Engineers, be in direct communication with the Audit office on all matters regarding store accounts;

Chief Engineer's Remarks.

(d) It is found indispensable that the terminal works and divisional engineers should communicate with the Audit office through the Chief Engineer's office on all matters regarding stores accounts and not directly with the former office, and I do not recommend any change in this respect from the present system.

Agent and Manager's Remarks.

(d) From the 1st July the Telegraph store account will be kept distinct from the Engineering store account and the Telegraph Engineer will deal direct with the Audit office.

The similar proposal regarding the terminal workshops and district engineers is considered unnecessary and no good results would follow its adoption.

Agent and Manager's Remarks.

(c) It is thought that the proposal to have all surplus and unserviceable stores borne on the books of the General Stores would lead to the transferring departments fixing higher prices than would be legitimate on such stores and would thus result in Revenue being over-credited. The present system seems the better one.

(c) The mode of valuing old stores is prescribed in the Government of India Resolution, Nos. 213-218-A.G.R., dated 11th April 1874, and the Government of India Circular No. IX (Railway), dated 1st May 1883; and if this procedure be adopted, there is no danger of excessive valuation. In fact, the storekeeper would exercise a check on the district officers whose advantage it would be to value at as high a rate as possible.

(d) i. It is noted that the Telegraph Department will, in future, deal direct with Audit.

ii. As regards districts and workshops, I shall not, in face of the Company's opinion, make any

Examiner's Remarks.

(e) That the Auditor, who is in the same building as the Chief Engineer, should supply the latter officer with all details he may from time to time require regarding stocks in hand, issues, &c., and that the existing Engineering Store Accounts office at Rayapuram be closed;

(f) That divisional accounts be simplified by the abolition of ledgers as far as possible, the whole of the store details being incorporated into monthly returns to the Audit office similar to those now in use for rails;

Replies of Railway Officers.

Chief Engineer's Remarks.

(e) I strongly deprecate the closing of the Engineering Account office and its transfer to the Audit office, as the constant references necessary would lead to increased and needless correspondence. All that is required is an adequate staff under competent control to effect certain improvements in the direction suggested by the Government Examiner.

Agent and Manager's Remarks.

(e) This suggestion is disapproved of both by the Officiating Chief Auditor and the Chief Engineer.

Chief Engineer's Remarks.

(f) The divisional accounts are at present on a very satisfactory footing and are most valuable. The ledgers are required to enable the Resident Engineers to examine their stock when necessary.

Examiner's further Remarks.

further objection to accounts being transmitted through the Chief Engineer, but he should not, in my opinion, require to maintain any stock ledgers.

iii. Each Divisional Engineer and Workshop Superintendent should be responsible for the store in his own charge and the sum of the whole of the stocks should agree with the aggregate balances on the audit ledger.

(e) See my note on paragraph (d).

(f) I have, in a subsequent report on the Bangalore division, dated 27th June 1893, called attention to the fact that the work in the district offices connected with stores is unnecessarily heavy and that ledgers are, in my opinion, unnecessary.

Agent and Manager's Remarks.

(f) It is thought that if ledgers be kept at all for divisional accounts they may as well be complete. It is pointed out by the Chief Engineer that the ledgers are necessary.

(g) That supplies of petty stores be arranged for by fixed imprests instead of by maintenance of detailed divisional ledger accounts;

Chief Engineer's Remarks.

(g) The present system works satisfactorily and I do not consider any change advisable. There will always be some difficulty in keeping fixed imprests up to their proper limit, especially in raw materials, and no material advantage would be secured by the arrangement.

(g) In the same report I have alluded to the advantages to be gained by an imprest system, and, as it is accepted by the Company in the case of the Locomotive Department, it should also, in my opinion, be tried in the Engineering Department.

Agent and Manager's Remarks.

(g) The suggestion made here the Chief Engineer does not desire to adopt.

Chief Engineer's Remarks.

(h) That all material now in hand without value be appraised and brought on the books and that a uniform system be adopted in future of bringing stores on to the books as returned at a fair market value in conformity with the orders contained in Government of India Resolution Nos. 213—218-A.G.R., dated 11th April 1874, and Government of India Circular No. IX (Railway), dated 1st May 1883.
That the only exception made to this rule shall be in the case of petty articles set aside for early auction;

(h) The valuation of all material is now being carried out, but owing to the magnitude and the miscellaneous nature of the items to be dealt with, this work cannot be completed immediately.

Agent and Manager's Remarks.

(h) All material on hand without value is now being priced and brought on to the books.

(h) It is noted that the Company agree to this proposal, but a report should be submitted when the work has been completed.

Examiner's Remarks.

(i) That whatever system be adopted for the railway generally, whether of priced or unpriced accounts, it be applied to the Engineering as well as to the other departments;

(j) That occasion be taken when valuing and bringing surplus material of the Engineering Department in the books to re-value, and, if necessary, reduce the prices of articles which have been for years in stock or have from any other cause depreciated in value;

Chief Engineer's Remarks.

(i) Unpriced ledgers will be kept in future for the sake of uniformity, as this is the system adopted by the Locomotive and General Stores Departments.

Agent and Manager's Remarks.

(i) The numerical system of ledgers will be adopted by the Chief Engineer to ensure uniformity.

Chief Engineer's Remarks.

(j) This recommendation will be followed.

Agent and Manager's Remarks.

(j) With regard to this suggestion the Officiating Chief Auditor writes:—

"The Government Examiner's proposal to re-value, and, if necessary, reduce the prices of articles which have been in stock for years, &c., &c., can only be carried out if there be a surplus; otherwise lower prices will result in a debit to Revenue for 'loss on stores.' Moreover the proposal is wrong if it is to be applied to stores which are likely to be used on the railway. All such stores should be issued at their full value."

Examiner's further Remarks.

(i) It is noted that the Company agree to uniformity in system; but in the case of important articles, ledgers and store returns should be priced.

(j) i. It is noted that the Chief Engineer agrees to this proposal.

- ii. With regard to Officiating Chief Auditor's remarks, I would point out that I only propose to reduce values, if "necessary."
- iii. And further that I see no objection to articles standing on the books or being issued at their full "value," although there is, in my opinion, a very great distinction to be made between the terms "cost price" and "value."
- iv. Again, I know of no orders prohibiting the adjustment of incorrect store balances when there is not a surplus on other items.

(k) That it be made clear that no important adjustment of store balances consequent on depreciation or alteration in value of stock or owing to excesses or deficiencies on stock or other causes shall be made without the previous approval of the Government Consulting Engineer, that stores shall not be made use of while standing on the store books and that actuals shall be given in stock lists of all articles of varying prices—*vide* paragraphs 8 (g) and 9 (f) and (g).

(Signed)

J. LIGHTFOOT,

Exr., Railway Accts.,
Madras.

18th January 1893.

Chief Engineer's Remarks.

(k) The procedure prescribed for any important adjustments of store balances will in future be observed.

(k) It is noted that the Company admit the suggestion made in this paragraph.

Agent and Manager's Remarks.

(k) Within reasonable limits this is accepted, but it is considered it should not apply to the half-yearly re-adjustment of prices which, if properly carried out, will work automatically; the latter part of the paragraph is undoubtedly correct.

All adjustments will require the approval of Government when in excess of the limits prescribed in G.O., No. 1102 R., dated 19th August 1893.

Concluding Observations.

1. Before the opinion pronounced by the Government Examiner of Accounts can be unreservedly accepted, it will be necessary to briefly review the circumstances which have contributed to the results of which the system, so adversely criticised, has been the outcome; and sufficient consideration and allowance do not appear to have been given to the mode of procedure established and recognized for many years in this department, the comparison of which with the more favorable conditions, has probably led to the observations made by the Government Examiner.

1. My remarks have been based on many years' experience of Railway store accounts in England and on Guaranteed Lines in India, and not, as inferred by the Chief Engineer, from modern State Railway procedure entirely.

2. Up to 1867 the accounts of the Engineering Department were under the exclusive control of a special covenanted officer designated "Engineering Accountant" supported by a separate staff of clerks by whom the entire work of checking and auditing the Chief Engineer's store accounts was efficiently performed, the whole details of such accounts being dealt with at head-quarters. In

2. If the remaining books were now transferred to Audit or abolished, there would, in my opinion, be a saving in labour and expense.

Concluding Observations.

Examiner's further Remarks.

April of that year this appointment was abolished, the clerical staff considerably curtailed, and the bulk of the ledgers and books transferred to the Audit office—*vide* paragraphs XIV to XVII (inclusive) of the Proceedings of the Madras Government in G.O., Railway No. 41, dated 17th April 1867.

3. In 1879 a further reduction of clerks in the Stores and Accounts section of the Chief Engineer's office was made in compliance with instructions from the Government of India—*vide* G.O., No. 737 R., dated 3rd September 1879.

4. In 1896 a special application for an increase in the number of clerks was made by this office owing to the demands from Government for additional returns required in regard to the value of stores, and the necessity for this increase was fully explained in this office letter No. 77/743 of 27th September 1896, to which I would invite reference, but sanction for this application was refused by the Consulting Engineer at the official meeting held on the 30th September 1896.

5. The establishment of the General Stores controls the receipt and issue of new materials and miscellaneous articles, and the repeated proposals to allow that department to deal with the stock of permanent-way and bridge materials have been rejected as should be borne on the books of the Chief Engineer, a special meeting, composed of the Chief Engineer, Chief Auditor and First Assistant Auditor, was held to consider the custody and valuation of permanent-way materials by the General Storekeeper. In recording this opinion, these officers stated "that experience in the past has shown that the

5. (i) In my opinion, departments should only have custody of special stores required for current use, and all other material should be borne on the books of the General Stores.

(ii) As regards returned stores, Government Orders contained in Government of India Resolution No. 213-A.G.R., of 11th April 1874, and Circular No. IX (Railway) of May 1883, contemplate the storekeeper taking over and valuing returned stores.

Engineer's Department has performed these duties and has kept a correct record of these stores; and they do not recommend any change to be made in the system in force on the Madras Railway, as the proposal put forward would not be so efficient or economical."

6. In the meantime, as the age of the line advanced the stock of old rails increased, but no market was found for them until 1890, and since then the numerous applications from the public for their purchase have been dealt with in the Chief Engineer's office, the value recovered and adjusted in the accounts. Owing to the injurious effect of the sea-air on iron-work a large depot was formed at Arkonam for all permanent-way materials, to which were added the constantly recurring importations of stock of iron-work for strengthening small bridges, and these have all been in charge of the Engineering Department. Lastly, the reconstruction of the Pennér, Chitravali and Papaghni bridges in 1890-92 further increased the work at head-quarters, as the whole of the surplus plant, tools and materials as well as the iron screw-piles and girders of the old demolished bridges had to be dealt with by the Accounts section of the Chief Engineer's office.

This can be only realized when the magnitude of these new bridges, costing over an aggregate of 35 lakhs, is duly considered and weighed.

7. From this it will be seen that any system for dealing with this increased mass of stores and material, both new and old, can only be carried out efficiently by an adequate staff of clerks; but with the limited establishment available in this office it was decided with a view to ensure the most satisfactory results to keep such ledgers and records only as would suffice for the preparation of statements to be submitted half-yearly to the Audit office.

6. Do. do. do.

7. (a) If District and Workshop officers' returns are made complete, there seems to be no necessity for store accounts in the Chief Engineer's office.

(b) I have not made much complaint about departmental ledgers. My remarks have been directed against the incomplete

Concluding Observations.

Examiner's further Remarks.

It is therefore concluded that the detailed statements asked for in many cases by the Government Examiner and not produced during his investigation of the accounts, are those which are only kept at the divisional offices and not at head-quarters. It is pointed out that this system has been in force for over 25 years, the accounts submitted had been approved by the Company's late Chief Auditor and no modification or change has been suggested by previous Government Examiners of Accounts up to 1st July 1890.

state of the inventories and the disagreement of their totals with the Audit ledger balances.

(c) It seems to be considered a valid explanation on the Madras Railway to state that a practice has been in force for many years, although it can hardly be supposed that an Examiner is bound to perpetuate errors or omissions which may previously have escaped notice.

8. In support of this statement, and with special reference to the Terminal Workshop accounts, I desire to invite your attention to the report of the committee assembled in compliance with paragraph 2 of G.O., No. 292 R., of 22nd May 1880, "to investigate the existing system of management and accounts in the central (i.e., terminal) and divisional workshops" of this railway, embodied in G.O., No. 418 R., of 17th June 1881. This investigation was carried out by the Deputy Consulting Engineer and Government Examiner of Railway Accounts conjointly with a Company's officer deputed by the Chief Engineer, and no comment whatever was made on the system of accounts which was then found in force and adhered to up to 1890.

8. Do. do. do.

9. The fixing of a value to items of surplus or unserviceable stores opens up a very important question as it affects the Company's "Store balances." A large portion of this stock has been charged off to the divisions or works to which they were originally issued, and to now fix an arbitrary value on articles of plant, &c., for which there is absolutely no demand in the local market, will only tend to augment the amount of capital locked up in stores and render this figure more or less fictitious.

9. The value will of course be regulated by the demand, and if there is no likelihood of early sale, the estimated value should not exceed what the article may fairly be expected to realize at an auction.

10: In this year the old system was replaced by the new one, under which every item of stores, whether new, second-hand, or unserviceable, is required to be brought on the books with a value, and this work is being carried out. But owing to the enormous mass of stores and accumulations of old and surplus stock to be thus treated, the work has occupied up to the present time, and will take probably to the end of the current year to fully complete as long as the existing inadequate staff have also to attend to the current duties of the office. The investigation of the Government Examiner was made at a time when the accounts were, as they still are, in a state of transition from the old system to the new; hence his inability to secure, immediately on demand, certain statements of details, inasmuch as these required special preparation and time to furnish.

11. In conclusion I desire to explain that every effort will be now made to write up to their full value all articles of which the book price was reduced under the old system; all omissions of adjustment in previous half-years will be rectified; the several recommendations of the Government Examiner adopted, wherever practicable, and I trust that, in consultation with the Chief Auditor, these improvements and modifications will be found fully introduced by the end of the current year. At the same time I would observe that under the old system of accounts the Company sustained no actual loss, for although the stock of stores in several instances were not represented by their money value, the materials themselves were always kept in safe custody and correctly recorded and could be fully accounted for in respect of number and quantity at any time.

10. Until my investigation commenced I did not observe any change in system. The pricing of old rails returned from the line had been introduced before I began to test the balances.

11. It may be noted that the Company will do all in their power to place matters on a sound footing.

Concluding Observations.

12. I take this opportunity of pointing out that, as a rule, railway plant and stores can only be utilized on railways and the failure in attracting purchasers by the repeated circulation of price lists of surplus and second-hand stock proves that no demand exists for such articles among the general public.

It is therefore suggested that the official advisers of Government should arrange for the transfer to newly projected metre-gauge lines of all surplus serviceable bridge materials found to be unsuitable for retention on the heavier or standard gauge railways. This was recently done, at the instigation of this office, when the South Indian Railway purchased and utilized some of Madras Railway girders at a bridge on their northern extension to the mutual advantage of both companies and with ultimate benefit to the State, and further action in this direction appears worthy of adoption.

(Signed) · H. R. P. CARTER,
Chief Engineer.

(Signed) LOUIS S. MOSS,
Agent and Manager.

26th July 1893.

Examiner's further Remarks.

12. The utilization of light broad-gauge material on metre-gauge lines would be advantageous, and Government no doubt contemplated such a possibility when they ordered surplus stores lists to be circulated to other railways and to Government departments.

(Sd.) J. LIGHTFOOT,
Examr., Railway Accts.,
Madras.

24th August 1893.

Missilamary

Note...

This is an order drafted
by Examiner on Report
by him on Engineering
Notes of Madison Ry.

I have seen them with
him & consider his exp.
position likely to lead to
a reduction in the store
balances & in the volume
now returns now kept
up by the Engineers (with
no good result)

The Board will doubtless
take the matter up -

Wm. 13
9

GRS 12/7
Wm. 13/7. R 18/7.

5-9-93
18 SEPTEMBER 1893, No. 1220 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

Report by the Examiner, Railway Accounts, Madras, on the Engineering Store balances of the Madras Railway ^{on/-} 31st December 1891, dated 18th January 1893, No. 29.

Letter from the Agent and Manager, Madras Railway, dated 26th July 1893, No. 7457/645, with enclosure, commenting upon the above report.

A further note by the Examiner of Railway Accounts, Madras, on the same subject, dated 24th August 1893.

ORDER—dated 18 September 1893, No. 1220 R., Public Works. 180 164p

The points requiring attention are noted below together with the orders Government considers it necessary to pass on each of the several questions raised:—

Subject.	Order.
(a) Priced ledgers to be maintained (paragraphs 1 to 3 and 34 of the report).	It is thought that the system suggested in a (ii) sub-paragraph (e) of G.O., No. 1102 R., dated 19th August 1893, will meet all requirements in the Engineering Department.
(b) Teak timber account [paragraphs 8 (d) to (f)].	The orders passed in paragraph (g) of G.O., No. 1102 R., dated 19th August 1893, relating to the teak stocks of the Locomotive Department may be also applied to the Engineering Department.
(c) Stores not to be made use of while standing on the store books [paragraphs 8 (g) and 34 (A)].	It is noted that the Company will abide by this ruling in future.
(d) That all material now in hand without value be appraised and taken to account [paragraphs 8 (e) and (j) and 34 (A)].	(d) (i) Should be adjusted in terms of paragraph e (iv) of G.O., No. 1102 R.; dated 19th August 1893; and a report submitted showing the effect of the adjustment upon the suspense balances. (ii) Great care should, however, be taken not to place too high a value on articles not likely to be utilized or sold at an early date. (iii) In such cases, the value should not, as a rule, exceed what the articles might reasonably be expected to realize at auction or by sale as old metal, &c.
(e) Departments to retain charge only of special stores peculiar to their own requirements and stores of a general nature to be obtained from General Stores by indent as required [paragraphs 8 (A) and 34 (e)].	(i) It is noted that the Company accept this suggestion. (ii) Under these circumstances, it may save labour if stores received from General Stores for direct issue to works be charged off direct without passing through the Engineering stock accounts.
(f) One timber stock to be maintained for the entire Railway instead of separate stocks for the Engineering and Locomotive Departments, or that the balance in each department be considerably reduced [paragraphs 8 (f) and 34 (b)].	The present system need not be altered; but it is hoped that the Company will keep the balances as low as possible consistent with efficiency.

Subject.

Order.

- | | |
|---|--|
| <p>(g) The system of pendencies should be improved [paragraph 8 (m)].</p> | <p>(i) This question is covered by paragraph e (i) of G.O., No. 1102 R., dated 19th August 1893.</p> <p>(ii) The Government takes this opportunity of calling particular attention to the necessity for dealing with all transactions, as far as possible, in the accounts of the month to which they relate.</p> |
| <p>(h) Details to be given in stock lists of all articles of varying prices [paragraphs 9 (f) and (g) and 34 (k)].</p> | <p>It is noted that the Company accept this ruling.</p> |
| <p>(i) Surveying instruments, old and new [paragraphs 22 and 23].</p> | <p>(i) All instruments not forming part of the working plant of the several offices should be valued, and such as are not likely to be issued within a reasonable time should be treated as surplus stores.</p> <p>(ii) Instruments forming part of the working plant of offices should be included in numerical lists of tools and plant and omitted from valuation lists of stores in stock.</p> |
| <p>(j) Abolition of system of keeping separate accounts for material obtained from particular districts or works [paragraph 28].</p> | <p>It is noted that the Company has transferred all such items to the ordinary stock accounts.</p> |
| <p>(k) Old rails not included in valuation lists, Rs. 71,069 [paragraphs 31 (a) to (f)].</p> | <p>It is noted that these have now been brought into account and it is hoped such large omissions will not again occur.</p> |
| <p>(l) Error of Rs. 5,705 owing to delay in adjustments and to profits on sales [paragraphs 31 (g) to (k)].</p> | <p>All necessary adjustments owing to reductions in prices of stores in hand should be made at the time of reduction in terms of paragraph e (v) of G.O., No. 1102 R., dated 19th August 1893, and all profits on sales should be adjusted as they arise.</p> |
| <p>(m) Different rates to be fixed for returned serviceable and unserviceable permanent way instead of adopting a uniform unserviceable rate for the whole [paragraph 31 (m)].</p> | <p>The Consulting Engineer will settle this matter after discussion with the Railway authorities.</p> |
| <p>(n) The audit ledgers and departmental balances to be periodically agreed and adjusted [paragraph 32].</p> | <p>It is noted that the Company agree to make all necessary adjustments and attention is drawn to paragraph e (iv) of G.O., No. 1102 R., dated 19th August 1893, relating to the same subject.</p> |
| <p>(o) All surplus and unserviceable stores to be borne on the books of the General Stores Department [paragraph 34 (c)].</p> | <p>Government is of opinion that this system should be adopted as far as possible.</p> |
| <p>(p) That sub-divisional workshops, such as the Terminal, Telegraph, and District Engineers, be in direct communication with the Audit office on all matters regarding store accounts [paragraph 34 (d)].</p> | <p>It is noted that the Telegraph Department will in future communicate direct with Audit.</p> <p>As regards divisions and workshops, the views contained in paragraph 34 (d) (ii) and (iii) of Examiner's further remarks are accepted by this Government, viz.—</p> <p>(i) That there would be no objection to accounts being transmitted through the Chief Engineer, but that officer would not probably require to maintain any stock ledgers.</p> <p>(ii) That each Divisional Engineer and Workshop Superintendent should be responsible for the stores in his charge and that the sum of the whole of the divisional stocks should agree with the aggregate balances on the audit ledgers in respect of engineering stores.</p> |

/8 SEPTEMBER 1893, No. 220 R., PUBLIC WORKS.

Subject.

Order.

- (g) That the Auditor should supply the Chief Engineer with all details he may, from time to time, require regarding stocks in hand, issues, &c., and that the existing Engineering Store Accounts office at Rayapuram be closed [paragraph 34 (c)]. This is covered by the last paragraph of preceding order No. (p).
- (r) That divisional accounts be simplified by the abolition of ledgers as far as possible, the whole of the store details being incorporated into monthly returns to the Audit office similar to those now in use for rails [paragraph 34 (f)]. The Government considers this proposal desirable subject to the orders contained in paragraph (p) above.
- (s) Impress in lieu of ledger-keeping at out-stations [paragraph 34 (g)]. It is considered the system accepted by the Locomotive (vide G.O., No. 1102 R., dated 19th August 1893) should also be tried in the Engineering Department.
- (t) System to be adopted in the Engineering Department, whether priced or unpriced accounts [paragraph 34 (h)]. It is noted that the Company agree to uniformity of system in all departments, and Government has in G.O., No. 1102 R., dated 19th August 1893, already expressed its opinion in favour of priced records for important articles.
- (u) Revaluation of articles owing to their having been in stock for many years or to their having depreciated in value [paragraph 34 (j)]. This is covered by the orders contained in paragraph e (iv) of G.O., No. 1102 R., dated 19th August 1893.
- (v) All important stock adjustments to be submitted for the approval of the Consulting Engineer [paragraph 34 (k)]. The orders passed in connection with e (v) of G.O., No. 1102 R., dated 19th August 1893, meet this case.
- (w) Consulting Engineer to arrange for the transfer of all surplus serviceable bridge material to newly projected metre gauge lines (paragraph 12 of concluding observations by Railway authorities). The suggestion made by the Company's Chief Engineer is in conformity with the wishes of Government, and it was for the purpose of giving information to enable Government officers and other Railways to know what articles are, from time to time, available that the issue of surplus store lists was prescribed. It might, however, be of assistance if the Company noted against each suitable item some such remark as the following: "Recommended for use on metre gauge lines or on district works, being too light for broad gauge railways."

2. The orders issued on the papers now considered may be also acted on in regard to the stores of all departments so far as they may be found applicable.

3. Ordered that a copy of these proceedings be forwarded to the Government of India for information.

[Here enter No. /22/ R., dated 18 September 1893.]

(True Extract.)

Joint Secy. to Govt., P.W.D.,
Railway Branch.

Forwarded.

To The Exam. Rg. Accts.
Agent Madras Rg.
The of R.R.

DESPATCHED

6 OCT 1893

PUBLIC WORKS DEPARTMENT.

Office of Examiner of Railway Accounts, Madras.

REPORT OF AN INSPECTION OF THE OFFICE OF THE RESIDENT
ENGINEER, SECOND DIVISION, SOUTH-WEST LINE,
MADRAS RAILWAY, AT BANGALORE.

Dates of Inspection		9th to 16th May 1893.
Head-quarters		Bangalore Cantonment.
Engineer in charge		G. A. F. French, Esq.
Inspecting officers		J. Lightfoot, Esq., Examiner. C. N. Balu Chetty Garu, Accountant.
Month's account selected for test		March 1893.
Date of last inspection		24th July 1886.
Inspecting officer		Major J. S. Bischoe, S.C.

Description.—For description of division, system of accounts, and forms in use, see appendix A.

2. *Result of test audit.*—With the exception of the few points referred to in subsequent paragraphs, the accounts under the existing system seem to have been well and correctly kept, but the system regarding stores seems complicated and, in my opinion, requires modification.

3. *Test audit of time-sheets with muster rolls*—The time-sheets of the permanent-way gangs, both regular and extra, of the first section were obtained and checked with the muster rolls submitted to the Resident Engineer by the Inspector of the section for the month of March 1893 and found correct.

4. *Test audit of workshop accounts.*—The pay sheet of the divisional workshop was examined with the muster roll or time-sheet book for the month and found correct with the following exceptions:—

(a) *Absentee allowances not shown in pay bills of workshops.*—One blacksmith maistry, T. Angumuthu Achary, was sick of fever and asthma for five days in the month, namely, 16th to 20th, but full pay is charged for him in the pay sheet at the rate of Rs. 30 per mensem, he being a monthly salaried man. No reference to his absence being quoted in the pay sheet.

(b) Filer Moonesawmy, whose wages are As. 6 per day, has been paid for the whole month (27 days) while the number of days he worked was only 11. He was sick for 11 days in February and 16 days in March, but he was allowed pay for the whole of the absent period without any special note of his absence being made in the pay bill.

(c) It is understood that the Resident Engineer is empowered by the head of his department to grant sick pay for one month during the year.

(d) I would submit that, except in the case of casual leave, all time spent on leave should be clearly stated in the pay sheets to enable a proper check to be maintained over the exercise of the powers granted to the several officers of the railway.

A
No. 1220-21 R 3/18-1903

(e) *Omission of certain men from muster rolls of workshops.*—No entry was made in the muster roll book for the following men paid through the workshop bill, their pay being allocated on the monthly totals of the pay bill. There seems very little objection to this arrangement, though a record of daily attendance would appear advisable:—

Four store watchmen.	Two Engineers' lascars.
One store lascar.	Three staff bungalow men.

5. (a) *Test audit of ballast measurement books.*—There were no ballast stacks measured and paid during March 1893, but the quantities of stacks measured and paid during February and April and a few of the items in May were checked and found correct.

(b) The stock of ballast on line on the second division, South-west line, on the 31st March 1893 was as follows:—

	Sand ballast.	Morumba ballast.	Total.
	c. yds.	c. yds.	c. yds.
First section	3,853	Nil.	3,853
Second "	2,285	639	2,924
Third "	2,265	1,457	3,722
Fourth "	2,445	524	2,969
Total	10,848	2,620	13,468

6. *Test audit of postings in Capital and Revenue ledgers.*—All postings in the capital and revenue ledgers during the month were tested and found correct.

7. *Test audit of store ledgers and balance returns.*—The quantities of stores entered in the several balance returns were checked with the ledgers and found correct.

8. *Summary.*—The following paragraphs recapitulate all important points arising out of the inspection, whether connected with suggestions regarding improvement of the system described in appendix A or with matters referred to in the report regarding the result of the test audit:—

(a) (i) *Printed forms in lieu of manuscript Capital and Revenue ledgers.*—There is, in my opinion, no need to keep ledgers on a Dr. and Cr. system, and even if it were necessary, a printed form should be supplied instead of ruling and heading a large number of pages by hand—*vide* paragraph 2 (f) of appendix A.

(ii) Forms somewhat similar to the ordinary registers in use on State Railways would be much easier to write up and more intelligible when completed.

(b) *Abolition of books showing cost of labour and superintendence of all divisions.*—It is hardly necessary to maintain this register, which is a mere copy of a statement sent for the Engineer's perusal and return—*vide* paragraph (2) (i) of appendix A.

(c) *Abolition of stores ledgers.*—It seems unnecessary to maintain four stores ledgers and five balance returns in the Divisional office and four balance returns in the Inspectors' offices, and the following system might be substituted:—

(i) *Monthly priced balance sheets of permanent-way by Engineer.*—All permanent way transactions might be accounted for in the Divisional office on one priced monthly return showing receipts, issues and balance.

(ii) The form now furnished by Inspectors modified by the addition of money columns would probably be found suitable for this purpose, or the form printed as appendix B, which has been found successful on the Oudh and Rohilkhand Railway might be adopted.

(iii) *Unpriced permanent-way returns by Inspectors.*—The Inspectors might, as at present, use unpriced forms, leaving money calculations to be made in Divisional office.

(iv) *Thirteen existing permanent-way forms and two ledgers to be abolished.*—The adoption of the permanent-way returns suggested in (ii) and (iii) would obviate the necessity for submitting the following forms as well as for maintaining two ledgers:—

By Engineer.	By Inspector.
E-9. Old iron rails sold	Monthly list of old rails sold.
E-122. Unserviceable rails removed from line.	Do. unserviceable rails removed from line.
E-5. List of Permanent-way materials expended.	Do. permanent-way materials expended.
E-40. Renewals of sleepers	Do. renewals of sleepers, pot. wooden.
E-86. Quarterly return of permanent-way materials with value.	Quarterly statement of unserviceable rails.
E-86. Quarterly return of permanent-way materials without value.	Do. of permanent-way.

(v) *Permanent-way recovered from line to be at once credited and Head office advice abolished.*—The adoption of the priced permanent-way balance proposed in (ii) would enable the Divisional officer to take credit for returned material as soon as recovered without waiting for an advice from head office *vide*—paragraph 6 (e) of appendix A.

(vi) *Fixed imprests in lieu of divisional stores.*—(a) The Inspectors and Divisional office might be furnished with fixed imprests of stores to be maintained to a permanent strength by submission of indents on the general store when necessary in lieu of maintaining separate ledgers or returns connected with the following stocks:—

Emergency stock.
Raw material.
Stores (i.e.) working tools and plant.

(vii) *Seven existing forms and two sets of ledgers to be abolished by substitution of imprest system.*—The adoption of fixed imprests would obviate the necessity for submission of the following returns as well as for the maintenance of a divisional store and two sets of ledgers:—

By Engineer.	By Inspector.
E-136. Monthly statements of cocoanut-oil	Monthly list of emergency stock.
	Do. stores.
	Do. raw material.
E-166. Quarterly list of raw material.	
E-2. Half-yearly list of divisional stores.	
E-189. Half-yearly list of emergency stock.	

(d) *Returned stores to be credited to both Revenue and Special works.*—(i) Returned stores of an important nature should be valued and passed through the general store accounts by credit to both maintenance and special works instead of to special works only as at present—*vide* paragraph 6 (d) of appendix A.

(ii) If necessary, the Inspectors might in special cases hold charge of heavy material and furnish the storekeeper with periodical lists of material left by him in their custody.

(iii) Returned stores of a petty nature might, as at present, be retained by Inspectors without value on unpriced lists to be periodically furnished to the Divisional officer.

(e) *Abolition of office copy of maintenance return.*—(i) An office copy of the return referred to in paragraph 2 (p) of appendix A is apparently unnecessary, as the whole information is extracted from the capital and revenue expenditure registers.

(ii) Even if it be considered necessary, after this reference it should be maintained in a printed form instead of ruling and heading many columns by hand monthly as pointed out in paragraph 4 (p) of appendix A.

(f) *Incorporation of Provident Fund, rent, income-tax, &c., into one form instead of separate forms for each.*—The following items included in separate forms (*vide*

paragraph (3) (i) of appendix A) might perhaps be incorporated into one form containing the combined information, as the same men's names have often to be repeated in each:—

Provident Fund subscription.
Rent deductions.
Income-tax deductions.

(g) *Divisional accounts and bills to be submitted direct to audit.*—(i) The accounts and bills of divisions might with advantage be sent direct to the Audit office, as is done on other railways.

(ii) The Audit office would then be required to keep the Chief Engineer advised of all divergences from sanction and furnish any statistical information necessary regarding outlay on the entire system.

(iii) This would save considerable labour in the Chief Engineer's office.

(h) *Departmental and special debits to be sent direct to divisions.*—As suggested in paragraph 7 (b) of appendix A, special advices by the audit and other departments might be sent direct to the Divisional officer for acceptance.

(i) *Distribution of Chief Engineer's establishment to divisions apparently unnecessary.*—The system of including a portion of the cost of the Chief Engineer's establishment in the divisional accounts might be discontinued as suggested in paragraph 7 (b) of appendix A.

(j) *Abolition of form of abstract of differences, E-87.*—District officers might continue to submit the maintenance return and return of outlay on schedule works to Chief Engineer, but the form of abstract of differences (No. E-87) would be unnecessary if the divisional accounts were sent direct to audit.

(k) *Outlay to be compared with allotment by Divisional officer.*—District officers should be furnished with particulars regarding budget allotment to each work in their charge, also with the maintenance estimates of their own divisions, to enable them to keep their outlay within proper amounts by record of outlay against allotments which is not now maintained—*vide* paragraph 2 (d) of appendix A.

(l) *Cash imprest in lieu of payment of contingencies through contractors' bills.*—The system of paying for contingencies through contractors' bills should be considered and if thought expedient revised—*vide* paragraph (8) (a) of appendix A.

(m) *Order required regarding leave granted without entry on pay bills.*—The system of granting leave without notification thereof on the pay bill should be prohibited—*vide* paragraph (4) (d) of this report.

(n) *Form of cash receipt and cash-book required.*—A form of receipt should be adopted for cash recovered in the district in respect of sales, &c., and a cash-book maintained—*vide* paragraph 6 (h) and (i) of appendix A.

(o) *Stores without value should be appraised and their value brought on to Company's books.*—All important stores standing on the books without value should be appraised and taken to account—*vide* paragraph 6 (c) (e) and (f) of appendix A.

(p) *Periodical revision of district rates to contractors.*—The fixed contractors' rates which have been in force for years may possibly require periodical reconsideration and record at official meeting.

It might be of advantage to put the several rates in force on all districts in a tabular form for the purpose of comparison.

(Signed) J. LIGHTFOOT,
Examiner of Railway Accounts.

27th June 1893.

APPENDIX A TO REPORT ON INSPECTION OF THE OFFICE OF THE RESIDENT ENGINEER, SECOND DIVISION, MADRAS RAILWAY, AT BANGALORE IN MAY 1893.

(1) *Description of division.*—The division consists of four sections, each in charge of an Inspector, with a workshop and store at head-quarters in charge of the Engineer.

(2) *Books maintained in the Engineer's office.*—The following books are maintained in the office of the Engineer:—

(a) *A bill book* being a guard book containing counterfoils of contractors' bills submitted for payment (capital and revenue).

(b) *A Revenue ledger* divided into four parts, viz.—

Part I showing the allocation of Revenue pay sheets and contractors' bills (ordinary and extraordinary expenditure being separately recorded).

The Debtor side of the ledger contains the total amount of the bills and the Creditor side the allocation thereof.

Part II containing a list of contractors' bills (Revenue) forwarded for payment through the Chief Engineer.

Part III containing a list of contractors' bills (Capital) forwarded for payment through the Chief Engineer.

Part IV containing the allocation of Capital pay sheets, the Debtor and Creditor sides being arranged as in I.

(c) *A Capital ledger* divided into two parts, viz.:—

Part I (i) containing separate records of the sanction and outlay against sanction in respect of works wholly chargeable to Capital or minor works and jointly chargeable to Capital and Revenue.

(ii) The total expenditure is separated between cash and stores.

(iii) A separate page is devoted to each sub-work, but no detail of outlay is recorded by sub-heads of estimates, such as earthwork, &c.

Part II containing an abstract of the foregoing expenditure on works in progress.

(d) *Budget allotment.*—

(i) No record is maintained of outlay against budget allotment or establishment rolls and no information appears to be furnished to the office bearing on these subjects.

(ii) I am, however, informed that this comparison is made in the office of the Chief Engineer.

(e) *Posting Revenue outlay on works.*—

Revenue works are twice posted, once in aggregate under the Revenue heads concerned, and, secondly, in the Capital ledger by individual works.

(f) *Printed forms necessary.*—

The Capital and Revenue registers are written up in blank books which have to be ruled in the office from time to time as required. As the columns and headings are numerous, and for the most part unchangeable, printed forms would apparently save labour.

(g) *A ballast measurement book.*—

posted from slips given by the Resident Engineer after measurement of stacks on line: contractors' bills are prepared from this book.

(h) *A ballast stock book.*—

kept by sections and showing the quantities of ballast, of each kind purchased, put in road, and remaining in stock each month.

(i) *A book showing cost of labour and superintendence of all divisions.*—

being a copy of a comparative statement of the average outlay per mile in each division of the entire line prepared in the Chief Engineer's office and forwarded for note and return.

(j) *A raw material ledger.*—

being a quantity ledger of consumable stores received and issued; such items are charged off to works as received, but a quantity ledger is maintained showing the actual issues and stock in hand.

(k) *A permanent-way ledger (with value)*—

This includes new material and such material as has been returned from the line with value.

(l) *A permanent-way ledger (without value)*—

This contains a register by quantity only of certain old stocks held in the district without value.

(m) *A store ledger*—

being a record of unconsumable stores and plant in the district without value, the material having been charged to works as received and a quantity register maintained of actual issues and stock in hand.

(n) *An emergency stock list*—

No Ledger is maintained on this account, but each district holds a stock for use in case of emergency and maintains a stock list.

The material is entered in a list by quantity only, although, in some cases, the value is dealt with in the returns of the Chief Engineer's office.

(o) *Workshop registers*—

(i) *Time or diary book* showing work on which each man is engaged daily, a page being set apart for each individual.

(ii) *Muster roll book*, merely a collection of muster rolls bound in book form.

(iii) *Summary book*, showing the allocation of pay sheets for the month.

(iv) No separate debit is made to works in respect of general charges, the pay of the supervising staff being allocated direct to maintenance or general supervision.

(p) *Office copy of maintenance return*—

This is a manuscript copy of the printed return supplied monthly to the Chief Engineer.

It is doubtful whether a copy is necessary, as the return is a mere extract from the Revenue register, but, if necessary, labour would be saved by adopting a printed form.

(3) *Returns furnished by Engineer's office.*—The following is a classified list of the returns furnished by the Engineer's office:—

Number of
Company's
form.

(i) *Disbursement of bills.*

E. 52	Establishment bill.
E. 123	Allocation thereof.
E. 58-A	Batta certificate.
E. 137	Provident fund subscriptions.
E. 30	Bungalow rent return.
	Income-tax deductions.
E. 55	Revenue pay sheets.
E. 143	Do. allocation sheet.
	Workshop do.
	Gate-men do.
E. 117	Revenue contractors' bills.
E. 37-A	Do. do. bill forwarding list.
E. 81	Do. abstract of bills passed by Engineer.
E. 66	Capital pay sheets.
E. 60	Do. allocation sheet.
E. 117	Do. contractors' bills.
E. 37-A	Do. do. forwarding list.
E. 81	Do. abstract of bills passed by Engineer.

(ii) *Accounts, other than stores.*

E. 35	Cost of maintenance of way and works (monthly).
E. 87	Abstract of differences between maintenance, return and total of official forms [i.e., of monthly debits from all sources] (monthly).
E. 33	Expenditure on schedule works (i.e., capital, revenue, special) in progress (monthly).
E. 187	Completion reports.
	Maintenance estimates (half-yearly).

(iii) *Stores.*

E. 9	Old iron rails sold during month.
E. 122	Unserviceable rails removed from line.
E. 6	List of permanent-way material expended.
E. 40	Renewals of sleepers.
E. 136	Receipts and consumption—coconut-oil.
E. 149	Indents uncomplished with.
E. 166	Quarterly stock list—raw material.
E. 86	Do. do. permanent-way with value.
	Do. do. do. without value.
E. 2	Half-yearly do. divisional stores.
E. 189	Do. do. emergency.

(iv) *Executive returns.*

E. 20-A	Progress of works (monthly).
114-A	Rails inverted and taken out (monthly).
	Creep of rails (quarterly).

(4) *Returns furnished by Inspectors.*—The following is a classified list of returns furnished to the Engineer by the Inspectors of Sections:—

(i) *Time sheets and labour bills.*

	Extra labour time sheets, weekly.
	Do. do. monthly, summary.
	Ordinary gangs time sheet do. do.
	Gate-men time sheet, monthly, summary.

(ii) *Contractors' bills.*

	Memorandum of vouchers passed.
	Contractors' bills.
	Do. forwarding memorandum.

(iii) *Stores.*

	Indents on general stores for signature.
	List of indents uncomplished with.
	Indents for oil on divisional store.
	Monthly list of emergency stock.
	Do. of stores in hand.
	Do. of raw material.
	Do. of permanent-way material expended.
	Do. of renewals of sleepers, pot.
	Do. of do. wooden.
	Do. of old rails sold.
	Do. of unserviceable rails removed from line.
	Quarterly statement of unserviceable rails stacked at stations.
	Quarterly statement of unserviceable permanent-way material stacked at stations.

(iv) *Executive returns.*

	Rails inverted and taken out, monthly.
	Progress of works, monthly.
	Creep of rails (quarterly).

(5) *Procedure adopted in preparation and payment of labour sheets and contractors' bills.*—The following is the procedure adopted with regard to the maintenance of time-sheets and preparation of labour sheets and contractors' bills:—

(a) *Regular gangs.*

- The time-sheet form contains daily columns and monthly totals.
- The gang maistry prepares the time-sheet and sends it to the Inspector of the section.
- The Inspector incorporates the time-sheets of all gangs into pay bill form and sends them to the Resident Engineer who examines, certifies and sends them forward to the Chief Engineer, who, in his turn, forwards them to the Chief Auditor for payment.
- A section maistry checks the gangs in his section against the gang maistries' time sheets.

- (v) The Permanent-way Inspector of the section checks the gangs occasionally.
- (vi) The Resident Engineer also occasionally musters the gangs when out on inspection.
- (vii) The check exercised in the Resident Engineer's office is to see that the sanctioned number of men and gangs per mile or length is not exceeded.

(b) *Extra Gangs.*

- (i) A somewhat similar system to that in force for regular gangs is adopted with regard to extra gangs.
- (ii) Special gangs are mustered morning and evening either by the section maistry or by Sub and Assistant Inspectors.
- (iii) Weekly time sheets are submitted for inspection instead of monthly ones, but labour bills are submitted monthly with those of the regular gangs.

(c) *Contractors' bills.*

- (i) Petty contracts are let for building, earthwork, &c., at fixed district rates which have been in force for years.
- (ii) Inspectors measure the work and keep details in rough note-books.
- (iii) Monthly bills are prepared in the form referred to in (v), and on the back of these the Inspectors give details of measurements and allocate quantities.
- (iv) The Resident Engineer then allocates the amounts to the several works and account heads.
- (v) Contractors do not prepare their own bills, but sign the bills prepared by the company which is in triplicate, one for the Inspector, one for the Resident Engineer and one for audit.

(d) *Mode of Payment.*

- (i) Payments are made by cashkeepers sent from the cashier's office, Madras, and witnessed by the Inspector of the section.
- (ii) Unclaimed wages of gangs are demanded through the Resident Engineer and not through the Inspector of the section.
- (iii) Line bills are submitted to the Chief Engineer between the 10th and 12th of each month and are usually disbursed between the 22nd and 30th.

(6) *Procedure adopted in regard to Stores—*

(i) *New Stores.*

- (a) New permanent-way as received is accounted for both by quantity and value.
- (b) Other stores as received on the division are immediately charged to works.

(ii) *Returned stores.*

- (c) Capital and special revenue works are upon completion credited with stores returned, but, except in the case of permanent-way, no credit is given for stores returned by revenue.
- (d) The credit for permanent-way is not given in the month of recovery, but a return is sent to the Chief Engineer of the monthly recoveries, and he then authorizes the division what to take credit for and this is usually done in the following month.
- (e) As already explained in paragraph 31 (f) of my report on the engineering stores, certain old stocks of permanent-way are held in the division without value, no credit having yet been given to revenue in respect thereof; the value of permanent-way in the district without value is not less than Rs. 40,000.

(iii) *Books and Returns.*

- (f) The store transactions are subdivided under the following heads, and separate monthly returns thereof, showing receipts, issues, and stock in hand, are made by each of the four sectional Inspectors for incorporation in the books and returns of the division, and for periodical communication to the Chief Engineer's office:—

Emergency stock.	Raw material.
Permanent-way with value.	Stores (other than raw material.)
Do. without value.	

With the exception of the 2nd item, the whole of these stores stand on the books without value.

(iv) *Sales.*

- (g) Sales of old stores and permanent way are made on the division, and the cash is at once forwarded with station remittances.
- (h) No cash-book is maintained for these transactions and no special form of counterfoil receipt was forthcoming.

(v) *Ballast.*

- (i) Ballast like stores is charged off as received and the actual receipts, consumption, and stock in hand recorded in a ledger by quantity only.

(vi) *Bricks, Lime, &c.*

- (j) Bricks, tiles and lime when kept in stock, are included in the Raw Material list.

(vii) *Audit Office Price Lists.*

- (k) Stores supplied by general store are debited to works upon priced lists furnished by audit office.

- (7) *Debits by Chief Engineer's office.*—(a) Advices from Chief Engineer are furnished in respect of debits for the following items:—

- (i) Proportion of Chief Engineer's establishment.
- (ii) Carriage of revenue stores.
- (iii) Miscellaneous debits by other departments.

- (b) It seems unnecessary to include the first item in the divisional accounts, while it would save time and labour if the remaining items were advised direct by the audit and other departments concerned.

- (8) *Office Contingencies.*—(a) The Engineer holds no petty cash on this account, all contingencies being passed through a petty contractor's account.

- (b) It would appear necessary to consider the advisability of altering this system by allowing a small imprest for petty disbursements.

MADRAS,
27th June 1893.

(Signed) JABEZ LIGHTFOOT,
Examiner of Railway Accounts.

APPENDIX B.

Form for recording Permanent-way Transactions monthly.

Description of articles.	Balance from last account.			Receipts during the month.			Total balance and receipts.			Issues during the month.			Balance at close of month.			
	Quantity.	Date.	Value.	Source from which received.	Quantity.	Rate.	Value.	Quantity.	Rate.	Value.	Quantity.	Rate.	Value.	Quantity.	Rate.	Value.
(Here print the various items of Permanent-way falling under each class, thus) —																
(1) <i>New Material.</i>																
Rails, steel, 20 feet.																
do., do.																
do., do.																
do., do.																
(2) <i>Scrap and material fit for</i>																
<i>Reuse Iron.</i>																
Rails, steel, 20 feet.																
do., do.																
do., do.																
do., do.																
(3) <i>Scrap and material fit for</i>																
<i>sidings.</i>																
Rails, 20 feet.																
do., do.																
do., do.																
do., do.																
(4) <i>Unserviceable material.</i>																
do., do.																
(and so on).																